

COLLEGE AND UNIVERSITY

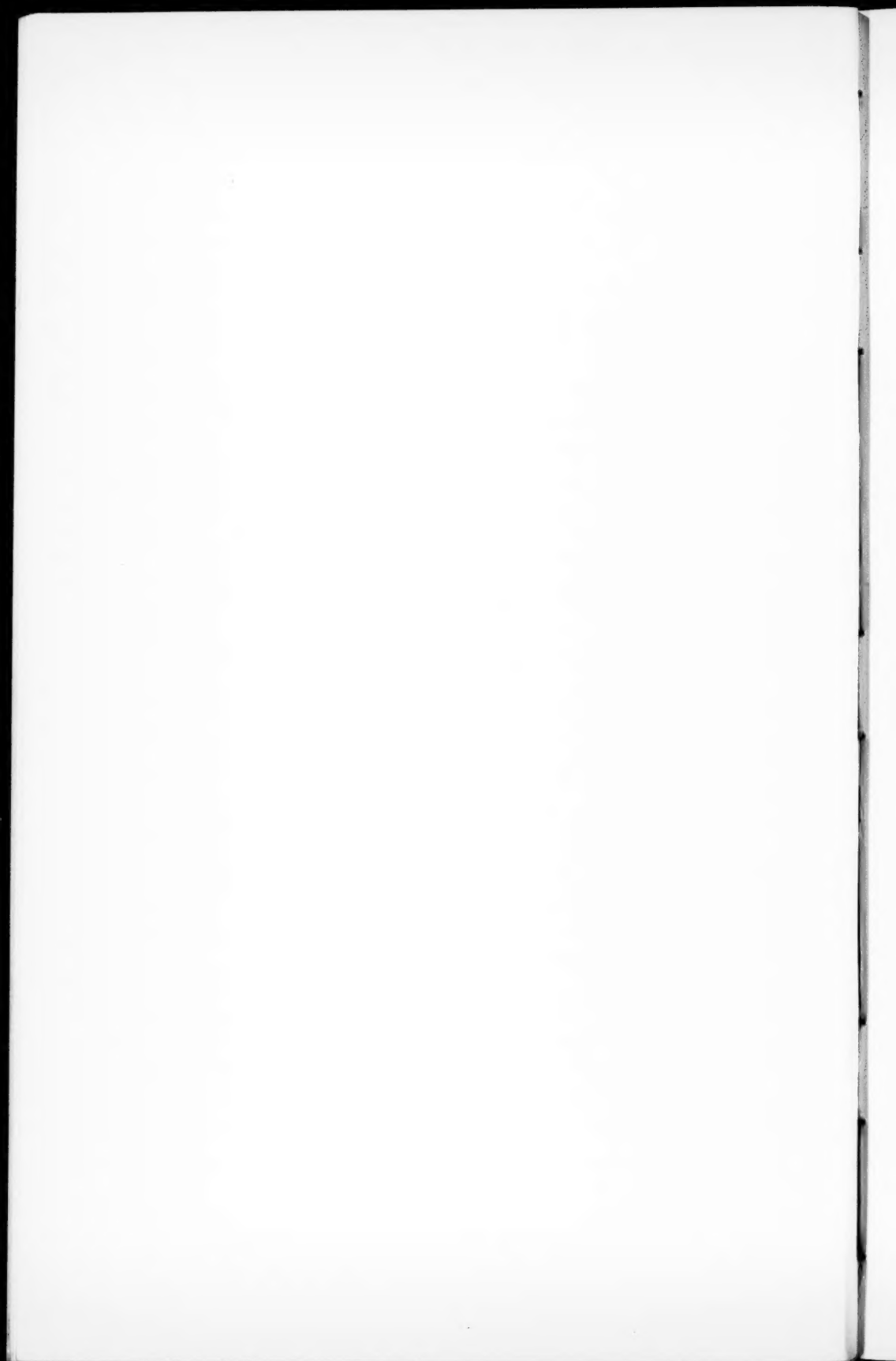
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**THE JOURNAL of the American
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Contributors to This Issue

•

NORMAN ADAMS is a member of the Department of Economics, University of Southern California. He was an exchange student last year at Oxford.

•

ELIZABETH C. BAKER is Principal Clerk in the Registrar's Office, University of California at Davis.

•

GEORGE A. BAKER is Associate Professor of Mathematics and Associate Statistician in the Experiment Station, University of California at Davis.

•

WILLIAM H. BROWN presents here the fourth report on a continuing study made at North Carolina College at Durham, where he is Director of the Bureau of Educational Research.

•

RAYMOND GIROD is Registrar and Director of Administrative Studies of Oklahoma A. and M. College, Stillwater.

•

SAMUEL B. GOULD is President of Antioch College. His paper herein was a recent address to the Antioch student body.

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JOHN A. HANNAH is President of Michigan State College. He has recently returned from a leave of absence during which he served as Assistant Secretary of Defense in charge of Manpower. His paper herein was an address given before

the Michigan State Educational Association in October.

•

ARTHUR A. HITCHCOCK is Director of the Junior Division and the Counseling Service at the University of Nebraska.

•

HOWARD KNUSTON is Assistant Professor of Education at Iowa State Teachers College.

•

LESLIE MOSER is Director of Guidance in the public schools of Nacogdoches, Texas.

•

EDWARD B. ROESSLER is Professor and Chairman of the Department of Mathematics and Statistician in the Experiment Station, University of California at Davis.

•

JOHN DALE RUSSELL is Chancellor and Executive Secretary of the Board of Educational Finance, State of New Mexico. He scarcely needs introduction to readers of COLLEGE AND UNIVERSITY, having spoken many times to meetings of AACRAO.

•

HOWARD B. SHONTZ is Registrar and Admissions Officer of the University of California at Davis.

•

HOWARD WHITE is Professor and Chairman of the Department of Government at Miami University.

THE OLD NORTH CHURCH and Paul Revere are as inseparable as registrars and admissions officers. In fact the fame of one depends upon the fame and good name of the other. History remembers both (that is, The Old North Church and Paul Revere, not the registrar and admissions officer), as cherished symbols of freedom not only in America but in lands around the world where American culture has spread.

Some of you who read this Journal or who plan to visit The Old North Church while you are attending the 41st annual meeting of AACRAO may be surprised to learn that there is no "steeple" from which to hang a lantern as a signal to a Paul Revere on this April's Patriot Day. Hurricane Carol, last August 31, blew down the steeple but the freedom, for which it stood as a symbol, like the church underneath it, stands as firm today as ever. And it will not be long before the steeple is restored again as it has been before. A hurricane in 1804 once knocked it over, but like freedom, it can be destroyed only by the disintegration of its foundation. Even its weathervane, made originally in 1740 by a coppersmith earlier than Paul Revere, named Shem Downe, will again be placed at the top. The Lantern League organized in 1927 to preserve this famous landmark will be glad to receive any contribution you may wish to make toward the Steeple Restoration Fund.

You can visit this famous church on the Sunday afternoon tour or at your own convenience. It is within two miles of the headquarters hotel in an area of Boston literally crammed with places of historic interest. Paul Revere House is only a block away and Bunker Hill Monument looks down on the Steeple from across the bay.

In attending the 41st national meeting of AACRAO, a historic treat in itself, each member, in addition to sharing the many advantages of meeting with his colleagues, will share in a renewed interest in our American heritage.

B. H. MOSES



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New Frontiers for Higher Education

SAMUEL B. GOULD

I

I CAN THINK of no better time than the present for a full re-examination of what is happening now and what seems bound to happen to higher education in America. Traditionally, our colleges and universities have placed much more emphasis upon their custodial function than upon exploring the possibilities of change and innovation. They have often indicated by their deeds that they are content to drift along, distributing the mass of knowledge they have accumulated and guarded over the years, rather than to strike out boldly into the treacherous currents formed by contemporary problems in society. Only in the area of research, both in the natural and social sciences, has higher education had moments of real magnificence. But even here it has too frequently forgotten that man has a soul as well as a personality, and that he is a creature of God rather than a machine.

There is a widespread reluctance of higher education to give truly dedicated attention to the teaching process, to the development of faculty, and to the techniques which have long been proved desirable at other levels of education. Possibly brought on by some of the excessive enthusiasms of the educationists, there is still much suspicion about new-fangled notions such as audio-visual aids, or discussion groups, or integrated subject matter, or other approaches generally accepted as modern. And there is a nostalgic clinging to the idea that the time-honored lecture method, the dog-eared notes which are the basis of a course year after year, the careful setting aside of parcels of

knowledge into tight little compartments and departments, or even the bored graduate student in charge of an undergraduate section with half his mind on his own doctorate, the other half on the progress of his colleagues and none at all on his students—that these are still adequate to the educational task which needs to be performed.

It is true that higher education has put a few tentative toes into the water to test the temperature and speed of the current. In its development of the concept of *general education*, it is actually up to its ankles. But it is still wading, not swimming. If the truth were told, much of what passes under the name of *general education* is merely a re-grouping of an old hodge-podge of courses. The integrative process, which is the key to general education, occurs by accident, if at all.

Paradoxical as it may seem, therefore, I am convinced that the tremendous and terrifying problems which now suddenly face higher education in America are the most fortunate developments ever to have occurred. They make it mandatory for us to examine, *really* examine what we are doing, to re-assess our educational philosophy, to adopt new methods and adapt old ones, to find new resources in teachers, facilities and financing, and in general to raise hob with the *status quo*. We shall have to solve these problems or higher education will make a steadily decreasing contribution to the welfare of the nation, especially in the quality of its products.

Let us take a brief look at the nature and characteristics of some of these problems.

II

Over two and a quarter million young people are now enrolled in some form of higher education. Conservative estimates indicate a growth in this number by 1970 of 67 per cent or a total of three and one-half million. Add to this the fact that by 1970 a larger proportion of men and women of college age will wish to attend college, and the figure goes higher. Add also the realization that many more young people who do not attend college have the capacity to do so and that their desire will increase and will bring about modifications in admissions policies. We are told, for example, that at present about one-half our young people indicate an intelligence which would make two years of college a profitable experience for them; of these, two-thirds would probably qualify for the present four-year course. A

figure of five million, therefore, by 1970 is undoubtedly very conservative.

Such a rise in enrollment automatically brings with it the corresponding problems of the three F's—facilities, faculty and financing. How will the present colleges absorb this increase in population? How will the funds be provided to expand old facilities and build new ones? And most important of all, where are we to find the teachers to staff our greatly enlarged institutions or our new ones? We have an ever mounting shortage of qualified teachers now at all levels.

Parallel to these quantitative problems are those relating to the subject matter and methods of teaching. Is the college or university truly coming close to fulfilling its functions in society? With 80 per cent of the leadership of this country now the products of colleges and universities, how adequate is the preparation of this leadership? What are the weak spots and how can they be strengthened? Why, in the face of more and more education today for more and more people, are we unable to meet successfully the challenge of living peaceably in the world? What have we emphasized wrongly, and what have we forgotten to emphasize at all?

All these questions seem staggering to the imagination and even hopeless to consider, yet I feel that in their solution lies a new series of approaches to higher education which will vitalize the learning process, bring it into closer relationship with the contemporary scene and add new strength and purposes. And beyond their solution lies a new educational land of exploration the frontiers of which we have not even begun to reach.

III

The time I have this morning makes possible only the barest mention of what we can project into the future as we think of our present educational situation. Let me sketch for you what I think the future has in store, provided we have the courage and the independence of spirit to turn our problems into opportunities. I say *we*, because all of us are involved in this—we of the Antioch faculty because we belong to an illustrious profession in which we should rightly take pride and for which we must continue to sacrifice as never before—you as students who will soon be graduates, parents, and members of a larger community. You will be the ones to decide whether higher education shall flourish or decline, whether it shall be for many or for a few. You will be the ones to decide the forms it

shall take. You will have to let it limp along, begging its way like a common mendicant, or you will have to support it willingly, even gladly.

More part-time teachers

Probably the greatest outward change of the next twenty years in higher education will be the involvement of scores and scores of educated men and women of the community to assist in the actual teaching process. It is not going to be possible to train (in the traditional sense of the word) all the teachers we shall need to cope with the great new influx of students, nor indeed to attract them in sufficient numbers into the profession. But it is going to be possible and even probable that more and more educated men and women will undertake teaching responsibilities along with their other vocations. More and more business men and industrialists will become visiting lecturers, more and more chemists and biologists and social scientists will give some of their time to the college classroom and laboratory, and more and more liberal arts graduates will find pleasure and satisfaction in exploring the humanities with the new generation. The core of full-time faculty will be the mentors and supervisors of this process, to guard carefully the quality of instruction. And there is no reason to suppose that at certain levels in all areas of knowledge the quality will necessarily suffer by reason of this broadening of the faculty base.

There will, therefore, be much coming and going between the college of the future and the world around it. The responsibility for helping to staff the institutions of learning will become acutely personal to many people who have previously felt this was someone else's concern. A new and larger pooling of intellectual resources will take place, stimulated first by an emergency need but later by a realization of the advantages of such a course of action. The dynamics of education will be assisted rather than retarded.

Closer ties to the community

The college of the future will be much more closely knit to the community. Indeed, most of the new institutions which inevitably must come into being will grow directly out of the community. Their students will usually live at home. They will not have to set up an artificial college community in which to practice; they will be able to function as participants in a real community from the very begin-

ning of their college careers without bothering about synthetic problems. And their transition from college students to adult citizenship will be virtually imperceptible.

The increasingly metropolitan character of our society will place new and unusual strains upon the urban college or university, which will find itself more and more expected to absorb the growing number of students. The great challenge of such an urban development will come in avoiding mediocrity of instruction within such a large structure. As a result, the idea of a central college with a number of branches located in strategic and nearby places will become the accepted permanent pattern just as it became a temporary pattern after World War II. Such a parent and satellite organization will keep instruction individualized, yet will offer economical administration.

The closer ties to the community will have real effect upon the traditional feelings about a college education. Much of the glamor and social prestige value will disappear, since many aspects of present campus life will be discarded as non-essential. A good deal of the social life of the student will center around the community and the college together, rather than on the college alone. In addition, the increasing proportion of young people enrolled in higher education will cause a breakdown of whatever exclusiveness remains today.

A continuing lifetime process of education

Another great change happily and inevitably will be forced upon us, namely a steady breakdown of the more formal lines of demarcation and division between education and life. As the college becomes more and more the cultural center of the community, there will be increased recognition that what we call "higher education" today merely supplies the tools and techniques for a continuing life-time process of education. What we now call "adult education" will become a natural and unbroken continuation of learning under the sponsorship of the college. Diplomas will represent mere check-points in this continuing process, and there will be no real segregation between the different types and levels of education. Young and old will attend classes by day or evening according to the rhythm of their own lives. And most important, students will learn at an early age that life must always be a combination of vocational and cultural pursuits. At such institutions as I am describing, the work-study plan will be obsolete in its present form but stronger than ever in a new form.

Emphasis upon leisure time activities

It is inevitable that this emphasis upon education as a continuing process will bring correspondingly new emphasis upon the importance of leisure-time activities for the individual. It is unthinkable to assume that man must occupy all the new hours of leisure which our industrial society will make increasingly possible for him without ever using his mind. And it is equally unthinkable to assume that the college will have no place in opening new avenues of exploration for him, in awakening him to new urges toward civic action and community participation, or in strengthening his bent for creativity whether it be inventive or artistic.

In the realm of physical leisure time activities, the college will be more concerned with developing man's understanding of the natural world around him and emphasizing those play activities which can be a regular part of his adult life. Team sports will have to share their interest to the students with more individualized efforts toward general outdoor education. The opportunities for participation of the family as a unit in outdoor activities will receive added impetus and encouragement.

Development of use of mass media of communication

The mass media of communication will have a very important part to play in the college of the future. They will be the means by which the gap between home and school will frequently be bridged. They will do their share in solving the problems of teacher shortage, for new techniques of presentation will necessarily emerge involving radio, television, facsimile broadcasting and the use of films. These techniques will not supplant the personal relationship between teacher and student which is vital to superior teaching, but they will supplement it in the areas of pure exposition of subject matter and operative procedure. They will cause great savings in time and will free the teacher to concentrate upon more creative elements in his personal relationships with the student.

We are only beginning to recognize the educational power latent in such a communication form as television, where we have in unique combination the opportunity to reach thousands or indeed millions of people simultaneously, coupled with the intimacy of approach and appeal to the individual through both eye and ear to be attained only in the face-to-face relationship of the home and seminar classroom.

There are many exciting problems waiting to be solved in the field of mass media, and in their solution great implications for higher education lie dormant. Once again, the pressure upon us of the sheer weight of the numbers to be educated will force us to grapple with these problems, and eventually the nature of the college will adapt itself to this new educational tool.

Interdependence of small colleges

An interesting phenomenon of the next few decades will be the increasing interdependence of small privately supported colleges which are reasonably close in geographic distance. The exigencies of economy will force them into co-operative arrangements so that they will share library facilities, will purchase supplies in wholesale quantities, will avoid duplication of facilities and some academic departments in some instances, and may go so far as to offer joint diplomas. By such organization they will often add great strength to themselves collectively, for they will make fullest use of the most superior qualities of their individual programs and facilities. In unity they will find added fulfillment.

IV

Up to this point I have been discussing the college of the future in terms of its externals, the kinds of changes which will manifest themselves in new physical arrangements, new types of personnel or in new techniques of instruction. These will be necessary and important. But they are on the plains and plateaus of adventure. The most challenging and vital frontiers to be reached lie on the ranges and mountain peaks of ideas and philosophical concepts. Let me mention only three which I think are interrelated closely and will contribute strength and power each to the others.

A global approach

I believe that the college of the future will throw off its present attitudes of insularity and will approach its teaching with a *global* outlook. It will cease giving mere lip service to "international-mindedness" by offering isolated courses in "Aspects of Western Civilization" or by sending a comparative handful of exchange students to Europe. What do we really know about the other great cultures of the world, the cultures that lie beyond the West? There are profound differences among all the peoples of the world which must be understood if there is to be any proper perspective for their

associations one with the other. Today, except for an occasional "institute of African or Asiatic studies" or a course in oriental art (which merely emphasizes our piecemeal approach) we have amazingly little to be proud of in our knowledge of the East. We know little of its language and literature, and even less of its philosophy. And in some of the courses we offer in this field, we are much more directly concerned with teaching our students the potentialities of other countries as customers than as partners in society.

The college of the future will begin to see that the humanities are a part of all civilizations, that man's destiny lies as much in Africa or Asia or the farthest corners of the earth as it does in the cultures of our more traditional neighbors. A new all-inclusiveness will permeate the areas of knowledge to be explored, and the problems of mankind will be studied in terms of the whole human race. What Dr. Ordway Tead has called a "cultural parochialism" will be supplanted by a new awareness of what is truly meant by the word "international." We shall find in the common threads of experience which run through all cultures and make the whole world kin the material for weaving a fabric of mutual understanding.

A new sense of the spiritual quality of man

Still another idea will burgeon and spread its influence in the college of the future. I speak now of a gradual but certain awakening to the presence of a spiritual core which is central to the whole accumulation of knowledge. This will show itself most often in new and recurring emphasis upon the interdependence of man rather than in orthodoxy or denominationalism. It will often show itself by deeds rather than words. It will think of the term "*liberating*" education rather than "*liberal* education" as it realizes the need for man's soul to be free. The former is much more accurately descriptive of what we are striving for. The college will begin to ponder with greater care over the simple statement "For what is a man profited if he shall gain the whole world, and lose his own soul?" or the sentence, "He that loseth his life for My sake shall find it." And with the study of the humanities as its central source of inspiration, the college will spread this influence into the natural and social sciences, surrounding them with a sense of mystery, of wonder and of reverence.

The humaneness of man as a human being will take its rightful place as an object of universal concern. In his rational and spiritual

qualities, he lifts himself above the rest of the animals and stands apart. It will not be enough to dissect him physically and examine his visible parts, nor to analyze his mental characteristics, unless, in so doing, there is a recognition of the great unanswerable questions which are fundamental to these analyses. The lesson which the college of the future will teach is one which was expressed back in the eighteenth century: "Knowledge is proud that it knows so much; wisdom is humble that it knows no more."

A desire for self-determination

Finally, higher education will tend to throw its support more and more in the direction of championing the capabilities of man for self-determination rather than for manipulation. The world today seems virtually obsessed with exploring the possibilities of making willing robots out of independent human beings. Soviet Russia has the most advanced techniques in this regard. But we are victims of this same sort of conditioning process here in America on a less violent scale and at a more mundane level. All our desires and emotions are played upon by master practitioners—what to eat, what to drink, where to travel, what to read—every facet of our daily lives appears to be fair game for the manipulators. We build public personalities as artfully as we build public buildings, with planned and purposeful strategy. We condition people to ideas and attitudes just as Pavlov conditioned his dogs. And somewhere in the middle of all this, the essential integrity of man and his essential capacity to determine his own destiny, to make choices, to assert his individuality has been lost or mislaid.

Socrates said that the supreme goal of education is *virtue*, "the tending of our souls," and he put to Protagoras the proposition, "I wish that you would, if possible, show me a little more clearly that virtue can be taught." Higher education has never really taken up the challenge, but has rather assumed either that the task cannot be performed or that it is not its concern. But we are stirred today as never before by the pressure of discoveries and events to an almost desperate resolve that Socrates' proposition deserves a second look. Our scientists not so long ago held to the thesis that their only function was to give mankind the fruit of their discoveries and inventions and that the use of them was someone else's problem. Today they seem troubled with the moral implications of their work.

Higher education in the future will place opposite the constantly recurring question of "*Can* we do this?" (whether it be asked in physical science or sociology or whatever else) the equally recurring and more compelling question, "*Ought* we do this?" And man will have a chance to work out his own answers.

V

Well, these are *some* of the frontiers. I have not even touched upon others. There is, for example, the awakening of a new sense of responsibility in higher education to the needs of the superior student. There is the awakening of a new sense of responsibility to the in-service development of the teacher. And there are others. In the areas I have mentioned so briefly, each could be developed into a much fuller consideration than is possible today. My purpose has been to put them on the record.

It seems to me that this is the time for experimentation, for practical research in all these areas. We have a few years of grace before the full impact of population trends, technological advances and social changes will be fully apparent. After that, it will be a mad scramble to keep up. We shall be putting fingers into the dikes against a mighty flood. In such an atmosphere of crisis we shall merely compound the errors and omissions of the past. But careful study now, properly guided and supported, will lead us to soundly conceived solutions and eventually to their implementation.

Who shall explore these possibilities? Are they valid or are they impractical dreams? If desirable, how are they to come about?

America has need of pioneers, and never more so than now. The great reaches of the continents have had their share of exploration, but the great reaches of the mind and spirit have vast unknown territories. Higher education has its portion of these unknowns, waiting only for men and women of courage and resourcefulness, experts and laymen alike, to venture boldly. The task of reaching these frontiers will have little of the heroic and dramatic to make it more appealing. Instead it will be a stumbling, heartbreaking struggle, and its rewards will always be reaped by the generations to follow. But perhaps these are the finest rewards, after all. At least, I like to think so.

Short-Range Forecasts of Enrollments

JOHN DALE RUSSELL

GREAT INTEREST has developed in long-range forecasts of college enrollment following the publication of studies by Ronald Thompson under the sponsorship of the American Association of Collegiate Registrars and Admissions Officers. These long-range forecasts are expected only to indicate the general trend of future enrollments, and not to yield very precise figures for the period 10 or 15 years hence. The technique used by Thompson is difficult to apply to an individual institution, except as the assumption is made that it will share equally with other institutions in its state or region in the general increase in enrollments that is to occur there. The individual institution, while broadly interested in the trends that lie a decade or more in the future, is even more vitally concerned with the short-range prediction of its enrollments for the year or two ahead of that in which it is operating. In contrast with long-range forecasts, which are expected only to reflect general trends, the short-term forecast needs to be as accurate as possible in order to be of value in institutional planning.

Short-range forecasts of enrollment are especially important in the framing of institutional budgets, both with respect to estimates of expenditures needed to support the instructional program, and also with respect to estimates of income from student fees. Institutions that obtain funds from state legislatures meeting biennially are generally under the necessity of forecasting enrollment for a period two years or more ahead of the date at which the budget request is submitted. Accurate forecasts of enrollments for the year ahead are necessary not only in the budgetary process but also in many other phases of institutional operations. The stock to be ordered for the bookstore, the number of non-tenure faculty members to be employed, arrangements for the housing of students, and even the plans for registration of students are examples of other activities in which an accurate forecast of enrollments for the year ahead is essential to good management.

The registrar is usually in the best position to make the forecast of institutional enrollment for the coming year, particularly if the

registrar is also the admissions officer. Sometimes the business manager of the college will have ideas of his own as to the probable enrollment of the coming year, especially when he makes up the income side of the budget and estimates the receipts from student fees. He is likely in this situation to tend toward an overly conservative estimate. Deans and departments heads, by contrast, are likely to make an overly liberal forecast of enrollments when planning their instructional programs. The registrar and admissions officer is probably more nearly free from pressures that would bias his judgment in the forecasting of enrollments than almost any other official of the institution. In his office, furthermore, are the essential records of previous years, the foundation on which all forecasting must be based.

As previously noted, accurate forecasts of enrollment are particularly important for state educational institutions in submitting their requests for appropriations to the legislature. In states where the budgetary procedure is effectively managed there is a tendency to expect some sort of relationship between appropriations and the number of students to be served in each institution. Accurate figures can, of course, be obtained on past enrollments. But appropriations for future years should be related to the needs for service to the enrollments of those future years, not distributed as a reward for the enrollments maintained in the past. Admittedly forecasts of enrollments for the years ahead are only intelligent guesses, and the degree of intelligence that has gone into the making of the forecast is not always apparent. Forecasts of enrollment made by individual institutions are often mistrusted by state fiscal authorities and members of the legislature because they realize that a college that over-estimates is in a favorable position compared with one that under-estimates for the coming biennium.

Because of frequent expression of lack of confidence in the enrollment forecasts made by the state educational institutions of New Mexico, a study has been made of the errors of estimate in budgets submitted during the past two years. The findings of this study may be of some general interest.

Available for the study were forecasts of enrollment made in the legislative budget requests for the biennium 1953-55, submitted by seven New Mexico colleges and universities in October 1952, and in their operating budget estimates for the year 1953-54 and 1954-55 submitted in May, respectively, of 1953 and 1954. The enrollment

forecasts in these budgets can be checked against the actual enrollment figures reported for certain registration periods. The registration periods used in this study are the summer terms of 1953 and 1954 (head count), the fall terms of 1953 and 1954 (both head count and full-time-student equivalent), and the full-time-student equivalent for the entire year of 1953-54 and 1954-55. At the time the study was made (December, 1954), the figure for the entire year 1954-55 was still an estimate rather than a final count, but the estimate should be reasonably close to the actual, inasmuch as both the summer term and the fall term enrollments were definitely known at the time the data were submitted. The legislative budget request for the biennium 1953-55, submitted in October, 1952, provided forecasts for each of the eight registration periods included in the study. The operating budget estimates submitted in May of 1953 and 1954 provided forecasts of enrollments only for the various registration periods, four in number, of the year to which the budget pertained.

The accompanying table summarizes the deviations of the forecasts from the actual enrollment figures. Institutions are identified by letter in order to avoid embarrassment to any official. The first section of the table shows the average percentage of error in the forecasts in each of the three budgets submitted. In this section of the table the total deviation is averaged without regard to plus and minus signs. The second section of the table is similar to the first, except that plus and minus signs are regarded in obtaining the average error of forecast; this allows an institution to compensate its over-estimates by its under-estimates, and vice versa. A plus sign is used to indicate an over-estimate, a minus sign an under-estimate. The third section of the table summarizes the average errors of forecast for each of the four different registration periods, using the same method of averaging as in the second section.

The data of the study indicate that the institutions in New Mexico differ considerably in their success in predicting enrollments. The individual tabulations from which the table was compiled show that at least two of the seven institutions have rather consistently over-estimated enrollments in their forecasts during the period covered by the study, while two others have regularly tended to under-estimate future enrollments. Some of the other institutions have fluctuated, sometimes under-estimating and sometimes over-estimating.

Although the individual institutions in New Mexico differ consider-

PERCENTAGES OF ERROR IN FORECASTS OF ENROLLMENTS FOR EIGHT DIFFERENT REGISTRATION PERIODS
IN 1953-54 AND 1954-55, BY STATE EDUCATIONAL INSTITUTIONS OF NEW MEXICO

Nature of Deviations of Forecasts from Actual Enrollments	Date When Forecast was Made	Percentage of Error in Forecast Made by Each Institution							
		College A	College B	College C	College D	College E	College F	College G	All Com- bined
Average total deviations disregard- ing whether plus or minus	Oct. 1952	5.1	17.7	16.1	12.2	9.8	97.3	18.9	4.4
	May 1953	1.3	6.6	13.0	9.2	10.4	6.3	30.6	4.7
	May 1954	11.2	9.6	5.4	7.1	15.3	74.5	12.6	9.2
	All Combined	5.6	12.9	12.6	10.2	11.3	68.8	20.2	5.7
Average net deviations counting plus and minus signs	Oct. 1952	-2.7	-15.6	+16.1	+8.6	+0.5	+93.6	+18.9	-0.6
	May 1953	+1.2	-1.5	+13.0	+9.0	+9.1	+3.9	+30.6	+4.7
	May 1954	-11.2	-9.6	+5.0	-6.5	-15.3	+64.4	+12.6	-9.2
	All Combined	-3.9	-10.6	+12.5	+4.9	-1.3	+63.9	+20.2	-1.4
Average net deviation counting + and - signs for: Summer terms Fall terms (head count) Fall terms (full-time equivalent) Entire Year (full-time equivalent)	All Forecasts Combined	-1.9	-31.0	+24.4	+16.6	-2.5	+239.3	*	-0.2
		-5.4	-7.0	+12.8	+4.6	-3.3	+6.4	+20.2	-3.0
		-5.8	-3.9	+3.9	+7.1	-6.2	+1.8	+20.2	-3.1
		-2.4	-0.4	+9.0	-5.1	+6.7	+7.8	+20.2	+0.1

* No summer session.

ably in their ability to forecast their enrollments accurately, the total forecast for the state, obtained by adding the individual institutional forecasts, has proved to be remarkably reliable. The percentage of error in the forecast for the entire state in the great majority of instances is less than the error of estimate of most of the institutions for the same period. Apparently the errors in the forecasts of the individual institutions have a way of cancelling each other. It is remarkable that, for state-wide totals, all the forecasts made by the seven New Mexico institutions in October 1952 for the biennium 1953-55 have proved to have a combined error of only six-tenth of one per cent, that error being in the direction of an under-estimate of the enrollments for the biennium. Curiously, the forecasts made in the legislative budget requests in October 1952, rather far in advance of the registration, proved to be generally more accurate than those made in the operating budget estimates, submitted much nearer the respective registration periods. Judging by the experience with the legislative budget requests submitted in October 1952, the New Mexico legislature, in determining the funds to be appropriated for the state's institutions of higher education, can be rather confident that the estimates of total needs are based on forecasts of future enrollments that are realistic and reliable.

The data of the study suggest that several of the institutions might improve considerably the accuracy of their forecasts of enrollment. The process should be something more than a visionary gazing into a crystal ball in the hope of coming up with an inspired answer. The forecast might be improved by considering first the probable enrollment in various categories of students. At least four of these categories are important, as follows:

- (1) Students in residence during the current year who will return for the next year. It should be possible to obtain this information with reasonable accuracy directly from the students. Advance registration, with a deposit on fees, is an even more accurate method and can be advantageously employed when there is a possibility that facilities may not be available to accommodate all who may wish to attend.

- (2) Former students who have dropped out a year or more, with eligibility for re-entry, who will return next year. Such persons can be circularized during the year to discover their plans. A communication of this sort serves to indicate that the institution has not lost interest in its former students and may stimulate some to return who were uncertain about re-entering.

(3) Transfers from other colleges with advanced standing. About the only method of making this estimate is by a review of the experience of preceding years. Institutions that customarily obtain a good many junior-college graduates as transfers may have opportunity to obtain information as to the probable number from that source by inquiring about the number of students to be graduated from the junior colleges.

(4) High school graduates entering college for the first time. This information can be based on data concerning the number to be graduated in the high schools from which the institution customarily receives the bulk of its entering students.

In making estimates in the categories described above, certain cautions are necessary. The enrollment estimates for the entire year must be corrected for an anticipated rate of attrition between semesters or terms. Registrations in the summer session may affect the number in certain of the categories. This is especially true of entering freshmen, for those who have enrolled for the summer session directly after high school graduation are not properly recorded in the fall term statistics as "first time in any college." Institutions having any considerable program of graduate work will find it advisable to make separate estimates of graduate and undergraduate students in certain of the categories.

The analytical treatment of the sources of enrollments as described above is useful, not only in improving the accuracy of the forecast, but also in pointing out areas in which the institution might improve its service to groups of students or potential students. Especially as trend figures become available over a period of years, a college is able to guide its activities into channels that will be most useful to the youth population that it should be serving. Comparative data for similarly situated institutions are also most helpful when treated in some of the enrollment categories described above.

The conclusions from the little study reported herewith may be summarized as follows:

1. Institutions differ considerably in their success in predicting their enrollments for a year or two ahead.
2. Predictions for a whole state, based on the forecasts of the various institutions, are likely to be much more reliable than the predictions for the individual institutions.
3. Predictions for the whole state of New Mexico, made in

October 1952 for the various registration periods of the biennium 1953-55, were remarkably close to the actual enrollments that later materialized. There was no general tendency to over-estimate future enrollments for the entire state, in spite of the belief of state fiscal officers and members of the legislature that this is customary.

4. Individual institutions might improve the accuracy of their forecasts by following better procedures, particularly by building up the total from separate estimates of enrollments in various categories.

The Schools' Responsibility in National Defense

JOHN A. HANNAH

RECENTLY my attention was drawn to a comment on education by a man generally credited with being a shrewd observer. This is what he said concerning the goals of education:

"All people do not agree in those things they would have a child taught, both with respect to improvement in virtue and a happy life; nor is it clear whether the object of it should be to improve the reason or rectify the morals. From the present mode of education we cannot determine with certainty to which men incline, whether to instruct a child in what will be useful to him in life, or what tends to virtue, or what is excellent; for all these things have their separate offenders."

You will have recognized those as the words of Aristotle, written some 2300 years ago but, making due allowance for the style of language, they could as well be the words of a modern commentator introducing an article in a professional educational journal. Today we have special pleaders, not for specific goals of education alone, but also for special subject matter fields, as well as for methods of instruction; we have those who differ greatly in their views of the purposes of education, and who should be taught.

It is well for me to confess at the outset that I am here today somewhat in the role of the special pleader. I make the confession readily and even proudly, because I believe deeply in what I propose to advocate. My inclination today, in the words of Aristotle, is to instruction of the child in that which will be intensively useful to him in a very short period of life, for the boys, and for a long time under current conditions for boys and girls alike. My plea, in short, is for education to prepare young people better for life in the kind of a world in which we live, and are likely to be living for a long time to come.

All of us have been duly warned, by a succession of informed men from the President down through our military leaders, diplomats, and statesmen, that we are likely to be living in a world of stress for a great many years. This period of abnormal strain surely will continue

as long as the free world and the world under the leadership of Moscow are arrayed against each other.

The immediate consequence is that for many years to come, the great majority of our physically fit young men will be called upon to serve for a comparatively short period of time in the armed forces of our country, and probably for a longer time thereafter in the reserve forces.

This is bound to have a tremendous impact upon our social and cultural structure. We can see already the effect of this unpleasant necessity upon young men in high schools and colleges, and to a lesser degree upon their sisters and their parents. In many respects, the effect is not a good one; it is not good for the young men themselves, and in my opinion, the effect bodes no long-lasting good for the future of our country.

If you will accept a reference to personal experience, I can tell you that in the course of my recent tour of duty in the Department of Defense, I was dismayed to learn of the concern of our military leaders about the mental attitudes of the young men serving in the uniforms of their country, particularly those who had been called to involuntary duty through Selective Service. The attitudes of many of them ranged from annoyance through resentment to downright anger because their private lives had been interrupted for what they did not consider to be a good reason.

This is properly a matter for concern to military leaders, who fully understand the importance of a good state of mind among the men they may be asked to lead into crucial battles for the defense of our country and the things for which it stands. This is properly a matter for concern for the rest of us, too, whose existence may some day well depend upon the brave and unflinching performance of their duty by those same young men. It is a matter for particular concern to teachers, with whom rests much of the responsibility for preparing young people to face the problems they will confront in the world after school.

This is not a new malady among our military forces; in World War II, when the battle lines were sharply drawn, and national existence was clearly at stake, there was reported to be among the military forces a widespread lack of understanding as to why we were fighting, and what we hoped to gain in victory. Too many men, asked why they were in the Army, Navy, or Marine Corps, had no better answer than

a quip to the effect that they were there because they had been drafted.

Much of this attitude is understandable and forgivable. We are not a militaristic nation. We are peace-loving by nature; we have been blessed with breathing space and resources, so that we have had no economic pressure to fight for existence. Until the development of the military airplane with its great potential for destroying distance, we were insulated by the wide oceans against the elbow-rubbing animosities of the old world.

And yet we must take into account that the American people, as a whole, rallied magnificently to every demand made upon them in World War II. In the aftermath of that war, they made the difficult and courageous decision to support a good portion of the world with their money and their food until their one-time allies could regain their feet. They accepted the necessity for meeting raw aggression with force when the Russian chessplayers made their move in Korea; they have spent their national treasure willingly to buttress the defenses of free nations throughout the world. They have accepted the necessity of sending their sons to serve on foreign soil in this time of uneasy peace.

This attitude of mind among a majority of adult Americans makes it the more difficult to understand why some of our young men accept the necessity of military service with such poor grace, why they begrudge so bitterly the time they must spend in uniform, guarding the free world's outposts against aggression. Is it because one must attain material possessions before one appreciates the responsibilities of citizenship? Is it because one cannot absorb the lessons our history has to teach until he attains maturity? I for one cannot believe it; I believe the primary and secondary schools can make education serve the individual and national interest by preparing youngsters for military service and life under conditions of stress as well as by preparing them for college, or for a job or profession.

This is no plea for indoctrination for universal military training nor a plea to support any specific foreign policy. It is, in simplest definition, a plea for a better job of preparation for citizenship in an era when good citizenship entails a period of military service in defense of the country against a real and present danger.

One of my greatest satisfactions in serving as Assistant Secretary of Defense for Manpower and Personnel was to supervise the inauguration of a project in citizenship education of the kind I have in

mind in the several military services. This project was undertaken at the suggestion of President Eisenhower, who carried to the White House with him from his days as supreme allied commander in Europe a vivid recollection of the lack of understanding on the part of fighting men as to why they were fighting. He has expressed himself to me and others to the effect that he was disturbed by the general lack of appreciation of what America means, and what it stands for. He is of the opinion, which I share, that our country will never be truly secure, and will never accomplish its destined purpose, until the great majority of people hold some clear convictions on some fundamental issues, and hold them closely and fiercely.

Among those convictions I would list such things as respect for the truth; belief in the dignity of the individual; belief in government by law, and not by man; belief that responsibility matches privilege; belief in honesty and fair play among friends and strangers alike; belief in a good God; belief in man's right to speak his mind freely, worship openly, and climb as high as his talents will lift him and his ambitions drive him, held within reasonable bounds by his consideration for others and the desire that the common good be served first of all.

It was upon these convictions, and others akin to them, that America was built. It is against these very convictions that the international conspiracy masquerading under the name of Communism is directed. It is to tenets and beliefs like these that the attention of the young men and women in the armed forces is being directed in the hope and belief that they will come to realize a little more clearly what their country means to them. It is being pointed out that these convictions are given their best expression in such documents as the Magna Carta, the Declaration of Independence, and the Bill of Rights. They are being given a chance to read and think about and discuss the great fundamental documents in the hope they will come to believe more deeply in the unique philosophy which underlies our social and political system.

For many of the young people in the armed services today, this will be their last chance to become familiar with things they should know and this is society's last chance to win from many of them a loyal and lasting support of beliefs and practices upon which the continued existence of our country as we have known and loved it will depend in the future. But it is an indictment of our educational

system that so many of our men coming into the military after completing at least the high school level of their education have not already acquired the information and knowledge and fundamental convictions we are talking about.

Because of my deep interest in this project and my belief in its importance, I am awaiting with more than casual interest the results of a related project being directed by the Michigan Secondary School Association. It is called, as you know, a pilot program of military information and orientation. As described by Nicholas Schreiber of Ann Arbor, the president of the association, it promises to go a long way toward bridging a great gap in the educational services of the high schools. It is based upon a study by the North Central Association which revealed the proportions of this deficiency in secondary school education.

In no respect is this a program of indoctrination or preparation for activities in the military services. The sponsors and prime movers have stated the case, and entered their disclaimer, far more eloquently than I in these words:

"The young men and women of today have need of sources of accurate information, unbiased and objective judgment, and sympathetic personal and group counseling to help them take the fact of required military service into consideration in their planning and to use it to the best possible advantage for themselves and their country. . . . It must be emphasized that educators may deplore the necessity for military service, and may or may not approve many aspects of the situation faced, but they must deal realistically with the experiences that most of their students are certain to encounter. . . ."

In 1951, the National Association of Secondary School Principals circulated a nine-point program intended to stimulate better guidance and information services for youth in this area, and again in 1954, but it remained for Michigan to assume the role of leadership. The introductory paragraphs contained a statement well worth remembering by all of us who are concerned professionally with education. The statement was:

"The present conflict is concerned with ideologies and philosophies of life. The individual's adjustment to the situation created by present world conditions is vitally important to his personal welfare and to the maintenance of national security."

It is gratifying to learn that an important and influential body of

school administrators has the good judgment to make such an observation and to seek to accomplish a better understanding of our democratic way of life.

This is a job for the schools primarily. Few parents are equipped to teach their children effectively in this area, and the churches necessarily restrict themselves to the spiritual aspects of the situation. One would be justified in saying that if the schools do not undertake this job, it will not be done. And it must be done, if we are to enjoy a maximum of security. It is a fact that defenses are not built of steel and concrete alone; they are built of minds and spirits of men and women too, and the latter ingredient is the more important by far in my estimation.

I would not even shrink from putting the word "indoctrination" to the kind of education I have in mind. If we do not hesitate to indoctrinate our children with a love of truth, a love of home, and a love of God, then I see no justification for balking at teaching them love of country, and love of what this country means. For mark this well—we are the beneficiaries of men and women who loved their country, and were willing to live good lives, and die bravely if need be, to preserve the fine and noble things in which they believed. Under our system of living together, the people make the decisions. We of this era have decided to hold on to what we have, effecting improvements as we can. We have decided that our kind of government, our kind of social system, our kind of political system, would be the best for the Americans of tomorrow. We have made our decisions in the light of certain knowledge, handed down to us by our predecessors. We will not be serving coming generations well unless the generations now in school, the citizens and parents of tomorrow, are given free and easy access to the information upon which Americans have repeatedly based the decisions which have made our country great and strong.

The mistake we sometimes make is to believe that the information on which to make decisions of today can be drawn from today's newspaper, this evening's radio commentator, this month's magazine. It isn't that easy; to know this country, and its people, and to make decisions in their best interests, one must know something of its origins, of the sacrifices that went into its building, and of the great men and women who made their contributions to its growth and development into the world power for good it is today.

We need no special curricula to accomplish these things. They can be integrated into the subject matter of the basic courses without doing violence to any educational precept. I have no plea for any extra course, although I would admit a personal preference for more emphasis upon history, and upon geography in this era when the United States has vital interests throughout the world, and our people travel to the ends of the earth with ease and in comfort on little provocation. I would particularly like to see more maps of the northern and southern hemispheres drawn with the poles as centers as they look to military strategists and navigators. They might teach us all a better appreciation of the need for air bases around the world, and of the need for giving serious study to the probable role of Asia in the world of tomorrow.

But for the most part, what needs to be accomplished can be accomplished within the framework of present structures and counseling programs. What is essential to accomplish is an appreciation on the part of more teachers of the need for the kind of instruction the times demand, and a greater determination to prepare young people adequately for the great decisions they may be called upon to make in the years to come.

It is my hope you have not gained the impression that this is a job for the secondary and primary schools alone. The colleges and universities need to give thought and attention to the matter as well, for they too have deficiencies in their course patterns, when they are measured against the needs of the atomic age.

But we must keep in mind that the primary and secondary schools have almost all young people under their influence for a long period of time, whereas the colleges and universities have the opportunity to guide and influence only a minority of young people, and then for a comparatively short time. Moreover, their ethical, moral and spiritual standards are established rather firmly by the time they come to us. There seems to be no escaping the fact that the major responsibility must rest upon the primary and secondary schools, although the colleges and universities must, of course, be held accountable for their full share.

It may interest you to know that R.O.T.C. instructional staffs have noted a need for this kind of instruction, or indoctrination, or inspiration, call it what you will. Their concern is a particularly keen one, because a large portion of the officers of our armed forces come today,

and will come tomorrow, from our civilian colleges and universities.

General Ridgway, Chief of Staff, United States Army, emphasized the importance of the R.O.T.C. program recently by pointing out that approximately 40 per cent of our Regular Army officers are R.O.T.C. graduates. That percentage will increase in the years to come, because the Army has for all practical purposes abandoned Officer Candidate Schools as a primary source of officers, having decided to rely principally upon R.O.T.C. graduates of civilian colleges and universities to fill out the officers corps beyond the number produced at West Point.

Educators who feel a sincere fear that we are risking militarism under our current defense policies may have overlooked the importance of the R.O.T.C. as a leavening influence in our armed forces. It is to be doubted that we will be in great danger of turning to militarism when such a large percentage of our military leaders are products of civilian colleges and universities. In this connection, it was heartening to have General Ridgway, a soldier of the old school if there ever was one, say that the Army was looking to civilian institutions to contribute to the replenishment of the officer corps, the basic ingredients of which he described as being integrity in the highest sense, and basic education in the sense of well-rounded education.

And then he added:

"We are not seeking to make Napoleons in the ROTC courses, but second lieutenants, and the broader their education, the wider their perspective, the better specialists they will make."

Offhand, I cannot think of a time in our history when educators had a greater opportunity to influence the development of national policy, and contribute more effectively to national security. For many years to come, almost all of the male graduates of our high schools will be called upon to serve for a time in the armed forces. For many of them, this means journeys overseas, and being stationed among people who are foreign even though they be allies. In a sense, each service man—whether enlisted man or officer—will be an ambassador of our country, considered by others to be a representative product of our educational system. It is my sincere hope that in the years to come, these young men—and women, too—will be increasingly good representatives of our democratic system, increasingly strong believers

in democracy as we understand and practice it here in the United States, increasingly effective defenders of our way of doing things against unfriendly critics, both envious and malicious. Only the schools can make them such.

Nor is this a matter in which the interests of male students alone are involved. Women in our country do not face the possibility of involuntary military service, and the prospect that they will ever be called upon for such service is extremely remote. But they are not indifferent to the prospects of their male classmates. Young women are very well aware that their brothers and friends are facing the certain prospect of military service. Perhaps this accounts for the increasing number of early marriages.

The married student is a commonplace on the campus today, where once he was a rarity. On the Michigan State campus at last count, somewhat more than 21 per cent of our students were married—one out of five. Our governing board has just undertaken to construct several hundred apartments for married students at considerable cost in the conviction that married students are with us to stay. We have more than a thousand applicants for housing from married couples, and the number increases all the time.

Once upon a time we mistakenly attributed this trend to the abnormal proportion of mature veterans among our students. But as the number of veterans has decreased, the number of married students has continued to increase, indicating plainly that other sociological forces are at work.

I suspect that young people are making the decision to marry early under the stress of the times, without much organized counseling as such, certainly without much guidance from our secondary schools. I venture to suggest that this trend might well be taken into account by our high schools as they plan how best to prepare their students for adult life in these difficult times.

From evidence I have at hand, the trend to earlier marriage is a good one. I do not know what the sociologists think about it, but from all indications, it is a good thing that increasing numbers of young people are refusing to defer marriage until after their educations and period of military service are completed.

My only fear—and here the need for good counseling comes into focus—is that too many young women with great capabilities will sacrifice their hopes and ambitions for college and university training for the sake of marriage and children. We need well-educated women

as well as men, and it would be a great loss if women were to slacken the pace at which they have been narrowing the gap between the numbers of men and the numbers of women in our colleges and universities.

There is, of course, a more compelling reason for giving girls in our schools and women in our colleges a better knowledge of the principles upon which our government and our way of life are grounded. They wield their full share of influence in public affairs, directly through their votes and participation in civic activities, far more through their influence upon the thinking of their families.

Most of all, I believe, young women need whatever reassurance and reinforcement they can gain in their positions as centers of home and family life, as the citadels of strength women so often prove themselves to be in time of difficulty or danger to those they love.

I have no pat formula, no specific course of action to recommend. All I have hoped to do is to underline the need for some things which may be missing from standard school curricula, and to stimulate you to thought and action on a matter which, in the light of my experience, I consider vital to the security of our nation.

The fact that this responsibility is a far-reaching one is only illustrative of the great reality of the unified interests of education. I think we in the education field have done our cause great harm in encouraging the public to think of education in compartments—as primary schools, secondary schools, junior colleges, senior colleges, universities, and graduate schools.

The truth is, as you all recognize, that education is a continuous process from cradle to grave, and that with the recent great expansion in the area of adult education, our educational institutions are now organized to provide instruction and guidance over the same span. In the light of this fact, we in education may have done ourselves great harm in permitting ourselves to think of our own compartments of education, and to work in their behalf exclusively, ignoring what should be plain to all of us that what advances the cause of education generally helps each segment of the whole.

It is because I believe so much in this unity of education that I welcomed this opportunity to meet with this group of co-workers in the field, and to improve my understanding of your problems and your accomplishments. I fear that the colleges and universities have been most derelict in keeping up good and friendly relations with the other school systems, overlooking the obvious fact that your

students of today will be our students of tomorrow, that all teachers have a common interest in the very nature of their calling, and that we cannot exist without each other.

Time was when the education of children and young people was accepted as the major responsibility of government at all levels—township, city and state. All of us have seen other social responsibilities of government claim increasing shares of available revenues to the point at which education and educators must fight hard to gain minimum support for what once used to have first priority on the resources of our people.

This is not to deny the importance of highways and prisons and public welfare and other services to which government is so heavily committed these days.

But I do suggest that it may be time to see if all of the activities of government are being supported in the right proportion; if each activity is given financial support in ratio to the social good it accomplishes, and whether those who labor in each field are paid in proportion to the good they accomplish for society.

We in education could welcome such an inquiry with enthusiasm, confident that no function of democratic government is more essential to the preservation of the values of democracy than the sound education of its citizens and future citizens.

In this period of world tension, when the free world must be on constant guard lest it be engulfed by intolerance and despotism, we need to awaken our fellow-citizens to the everlasting truth of the words of Lord Brougham: "Education makes a people easy to lead, but difficult to drive; easy to govern, but impossible to enslave."

The critics will immediately retort that educated peoples, within our memory, have been taken in by demagogues and dictators. That will give us the golden opportunity to retort that such peoples were not educated as we think of education—and we have hundreds of good definitions of education in the American sense. One of my favorites was written by a great educator and statesman, James Bryant Conant, former president of Harvard, now serving his country as High Commissioner in Germany. In his distinguished book, *General Education in a Free Society*, Dr. Conant wrote:

"The primary concern of American education today is not the development of the appreciation of the 'good life' in young gentlemen born to the purple. Our purpose is to cultivate in the largest number of future

citizens an appreciation both of the responsibilities and the benefits which come to them because they are American, and free."

That definition, like many others, points to the essential purpose of education as we see it in America—as an integral part of the training of men and women to take up the duties of citizenship in a free society. Freedom is essential to education as we see it, and education is essential to freedom.

This idea is not new or recent; Milton suggested the same thing when he wrote more than 300 years ago:

"I call, therefore, a complete and generous education that which fits a man to perform justly, skillfully, and magnanimously, all the offices, both public and private, of peace and war."

He was thinking, I believe, of the whole citizen—one trained and willing to do an honest day's work and live in tolerant communion with his neighbors in time of peace, trained and willing to defend his liberties in time of war.

Those who founded our country understood well that function of education. As James Russell Lowell once commented:

"It was in making education not only common to all, but in some sense compulsory on all, that the destiny of the free republic of America was practically settled."

Thomas Jefferson, who surely deserves to be called a patron saint of American education, once wrote that the diffusion of knowledge among the people was the only sure foundation for the preservation of freedom and happiness.

We in education believe in these things—must believe in them if we are to be true to our educational heritage—even though we seldom speak out in such terms. The American people once believed in the principle, and were outspoken in their views and generous in their support. I think they still believe in it—they need only to be reminded of the tremendous stake they have in seeing to it that education at all levels is adequately supported.

Our task as educators is to make absolutely sure that in appealing to the American people for their unqualified support, on this basis, we make sure that we are offering the kind of education—in both breadth and depth—that will best serve the cause of democracy and freedom.

Analyzing Some of the Transitory Fears of Entering College Freshmen¹

LESLIE MOSER

DURING the summer of 1953 this writer determined to make a survey of some of the outstanding problems and transitory fears of entering college freshmen. In order to facilitate the survey, a checklist was formulated by interviewing a large number of college students, high school graduates who planned to enroll in college and various college counseling and admissions personnel.

Permission was granted to the author to administer this checklist to freshman students at three Texas institutions of higher learning; namely, Stephen F. Austin College, Baylor University and Texas A&M College. The freshman students who completed the checklist numbered 1350. There follows a table showing the checklist items together with percentages of students who indicated problems in these areas. In applying these data, the reader is cautioned that this is a limited sample; but insofar as he is willing to accept these students as representative of a population, the data should be reasonably valid.

This writer feels that the information may be of particular value to college personnel whose responsibility it is to direct the various phases of orientation programs. The data should also be of interest to high school guidance workers who seek to do a good job of pre-college counseling.

According to the table, the greatest source of concern was with what may be called organizational-academic problems. Over 75 per cent of these students were anxious about their ability to pass college work and over 50 per cent were worried about course selections. Nearly half of the students were concerned about the friendliness of college teachers.

It is probable that student concern over passing college work and over course selection is fortuitous. These may be desirable aspects; but the concern with which the students view the overt friendliness of college teachers is indicative that these teachers have gained dis-

¹ The author would like to recognize the supervisory function of Harl R. Douglass in the preparation of this article.

It is a problem	Problem	It is one of my three greatest problems
Per cent		Per cent
42.4	Will my finances be sufficient for me to stay in school?	21.7
17.1	Are my clothes and personal appearance as good as the average?	2.1
19.5	Will I be able to find my way around without getting lost?	3.0
29.5	Will I be able to get a roommate I will like?	4.7
12.4	Will I be able to find a desirable place to stay?	1.5
18.6	Will I be subject to great temptation here at college?	2.1
47.5	Will the teachers be understanding and friendly?	7.6
10.7	Can I find a church group of my own faith?	1.6
37.3	Will I be able to make friends as I did in high school?	10.8
18.7	Will I be asked to join social groups?	2.1
77.6	Will I be able to pass and make good grades in college?	34.0
20.9	Will I have to undergo bad treatment from upperclassmen?	4.6
14.2	Can I get over being homesick?	5.3
52.1	What courses should I take that will help me?	15.0
24.1	Will I be drafted and have to give up college?	9.0

repute in this area at the hands of former college students. Positive efforts to improve the overt friendliness may have good results.

Personal-social problems were the second highest in incidence. For instance, 37.3 per cent were worried about their ability to make friends, 29.5 per cent were concerned about getting a desirable roommate and 20.9 per cent were concerned about harsh treatment from upperclassmen.

A careful study of these transitory fears of entering college freshmen may cause a closer adherence of orientation programs to the real problems of entering freshmen. It is certain that no person can study these data without gaining a conviction of the worth of programs and activities designed to make transition from high school to college more pleasant for entering college freshmen.

Relation between High School Accreditation and Success in College

BAIRD V. KEISTER

THE STATE of Arkansas provides by law for three classes of senior high schools. Class A schools must provide a minimum school term of 36 weeks, whereas only 32 weeks are required in the class B and C group. In class A schools four fifths of the classes in grades 10 through 12 must be taught by persons whose minimum educational qualification includes the baccalaureate degree. In B schools two thirds and in C schools one third of the classes at the corresponding level must be taught by teachers holding the bachelor's degree. Other differences have to do with the administrative staff, the library, pupil load, teaching load, graduation requirements, clerical staff, custodial staff, and financial support. A considerable number of class A high schools are not accredited by the North Central Association of Colleges and Secondary Schools.

The study reported here is an attempt to determine the relationship which may exist between the accreditation level of the high school and the ability of its graduates to do satisfactory college work.

The data were collected from the records of students entering the freshman class at Arkansas State College in the fall semester of 1950 and the fall semester of 1953. All such students who were graduates of Arkansas high schools and who completed the first semester of college work were considered in the study. These students were divided into three groups for each of the two years, and will be identified in subsequent portions of this report as follows:

Fall Semester Freshmen 1950:

- Group IA—Graduates of North Central High Schools
- Group IIA—Graduates of Class A High Schools
not accredited by the North Central Association
- Group IIIA—Graduates of Class B and C High Schools

Fall Semester Freshmen 1953:

- Group IB—Graduates of North Central High Schools
- Group IIB—Graduates of Class A High Schools
not accredited by the North Central Association
- Group IIIB—Graduates of Class B and C High Schools

Grade point averages for college work were calculated by assigning the numerical weights 4,3,2,1, and 0 to the marks A,B,C,D, and F respectively. The college grade point average for each student was determined by multiplying the number of semester hours in each grade category by its weight value, adding the products and dividing the total by the number of semester hours in the student's load. In calculating high school grade point averages physical education, chorus, and other activity credits were ignored. Otherwise the calculation was the same as for the college grades, the high school unit replacing the semester hour as the unit of credit. High school grades for four years were considered, whereas only the first semester of the freshman year of college work was used.

In addition to grade point averages, intelligence quotients as measured by the Otis Quick Scoring Test of Mental Ability were available. This test was administered to all entering freshmen during the orientation period preceding fall enrollment.

Means and standard deviations of IQ and both college and high school grade point averages for each group are presented in table I. Table II is derived from the data of table I and shows changes in group characteristics in the three year interval which elapsed between samplings. The only significant change appearing from table II is a 3.6 point drop in mean IQ of the North Central high school graduates. This difference is significant at the one per cent level of confidence. A possible explanation of this may be the greater number of graduates from these schools who enroll in college. It will be noted from table I that the number of freshmen from North Central high schools increased from 97 to 133 or 37.2 per cent. Class A graduates were fewer in 1953 than in 1950, while the number of Class B and C

TABLE I
MEANS AND STANDARD DEVIATIONS
IQ AND GRADE POINT AVERAGES

Group	No.	IQ		Coll. G.P.		H.S.G.P.	
		Mean	S. D.	Mean	S. D.	Mean	S. D.
I A	97	108.7	9.7	2.34	.720	2.69	.670
I B	133	105.1	11.9	2.32	.673	2.75	.585
II A	78	102.2	10.7	2.08	.740	2.85	.640
II B	69	102.3	9.1	2.20	.610	2.72	.715
III A	51	100.4	9.8	2.08	.760	2.96	.575
III B	62	99.7	12.3	2.11	.632	3.05	.546

TABLE II
DIFFERENCES BETWEEN GROUPS PAIRED ON BASIS OF YEAR OF
ADMISSION TO COLLEGE*

Basis	IA and IB	IIA and IIB	IIIA and IIIB
IQ:			
Difference	-3.6	+.1	-.7
S. E. of Diff.	1.4	1.63	2.13
S. R.	2.57 ¹	.061	.33
Coll. G. P.			
Difference	-.02	+.12	+.03
S. E. of Diff.	.092	.11	.14
S. R.	.22	1.09	.22
H. S. G. P.			
Difference	+.06	-.13	+.09
S. E. of Diff.	.085	.11	.11
S. R.	.71	1.18	.82

* Positive differences are in favor of 1953 groups.

¹ Significant at one per cent level of confidence.

graduates increased only 21.6 per cent. If the higher IQ is a result of greater selectivity, we might anticipate some difference in the two groups of graduates of the B and C schools, but there is little evidence to support this expectation. A further examination of table II reveals that the drop in average IQ for the North Central graduates is not reflected in either college or high school grade point average.

Table III shows relationship between college and high school grade point averages for each of the six groups of students. In all cases high school average exceeds college average. All significance ratios exceed 4, which indicates that we may reject the null hypotheses at the .01 per cent level of confidence. Furthermore, the difference increases as the accreditation level drops. For the North Central, Class A and

TABLE III
CORRELATION COEFFICIENTS AND MEAN DIFFERENCES BETWEEN
HIGH SCHOOL AND COLLEGE GRADE POINT AVERAGES

	Coefficient of Correlation	Mean Difference	S. E. of Difference	Significance Ratio
Group IA	.70	.35	.055	6.36
Group IB	.68	.43	.044	9.75
Group IIA	.58	.77	.072	10.70
Group IIB	.61	.52	.071	7.35
Group IIIA	.60	.88	.087	10.12
Group IIIB	.62	.94	.067	14.07

TABLE IV
DIFFERENCES AMONG GROUPS PAIRED ON BASIS OF HIGH SCHOOL
ACCREDITATION LEVEL*

	IA-IIA	IA-IIIA	IIA-IIIA	IB-IIIB	IB-IIIB	IIB-IIIB
IQ:						
Difference	+6.5	+8.3	+1.8	+2.8	+5.4	+2.6
S. E. of Diff.	1.56	1.69	1.83	1.49	1.89	1.94
S. R.	4.16 ¹	4.92 ¹	.99	1.88	2.86 ¹	1.34
Coll. G. P.:						
Difference	+.26	+.26	0.	+.12	+.21	+.09
S. E. of Diff.	.111	.129	.135	.090	.100	.106
S. R.	2.34	2.01	0.	1.33	2.10	.85
H. S. G. P.:						
Difference	-.16	-.27	-.11	+.03	-.30	-.33
S. E. of Diff.	.099	.105	.108	.101	.087	.111
S. R.	1.62	2.57 ¹	1.02	.30	3.45 ¹	2.97 ¹

* Positive differences favor groups of superior high school accreditation.

¹ Significant at one per cent level of confidence.

Class B and C groups the differences in 1950 were respectively .35, .77, and .88. In 1953 the corresponding differences were .43, .52, and .94. In each year the difference for students from Class B and C high schools was more than twice as great as for North Central graduates.

Since a 2.00 average is required of candidates for degrees, we might conclude that a student from a class B or C school ought to have a high school average of 2.75 to 3.00 to be reasonably confident of doing successful college work, whereas a student from a North Central school could expect success under similar circumstances if his high school average is from 2.25 to 2.50.

Table IV is presented to point up differences in IQ and grade averages among the groups paired on the basis of accreditation level of the high schools from which they graduated. When IQ is considered, the North Central graduates are consistently superior to the other groups although the superiority is less pronounced in 1953 than in 1950. In 1950 a difference exists in favor of North Central graduates over students from Class A and Class B and C schools, which is significant at the one per cent level of confidence. In 1953 North Central graduates were superior to Class B and C graduates but not Class A graduates, the difference being significant at the one per cent confidence level. However, the significance ratio in the former comparison dropped from 4.92 to 2.86 between 1950 and 1953.

College grade point averages for the North Central group are superior to those of the other groups in every case, although in no case is the significance ratio as high as it is with respect to IQ. In no instance is the difference significant at a confidence level as high as one per cent.

High school grade point averages show quite a different trend. Differences in college grade point averages were favorable in all cases to the graduates of schools with superior accreditation. The trend for high school grades was in exactly the opposite direction. All differences were negative, that is in favor of the groups with lower high school accreditation except in the case of the 1953 North Central and Class A groups. Here the difference was positive but very small, in fact significant only at the 76.4 per cent level of confidence.

CONCLUSIONS

The following tentative conclusions seem to be justified in the light of the data from which this study was made:

1. College freshmen from North Central high schools have somewhat higher average intelligence quotients than those from schools of lower accreditation levels.
2. The superiority of North Central graduates with respect to IQ appears to be less pronounced than it was some years ago.
3. The difference in quality of college work is in favor of graduates of schools with the higher accreditation, but differences in this respect are less pronounced than differences in IQ.
4. Differences in high school marks are in favor of schools with lower accreditation, the trend here being in exactly the opposite direction from that shown for IQ and college marks. In other words there is a tendency for schools of lower accreditation to give higher marks.
5. Marks given in high school are in general higher than those given in the first semester of college.
6. The discrepancy between high school and college marks increases as the high school accreditation level drops.

Pre-Enrollment as a Solution to Mass Enrollments in Colleges and Universities

RAYMOND GIROD

SINCE the "invasion" of college and university campuses by the GI's in 1947, the enrolling of students has been one of the most urgent problems facing college officials. On many campuses the president has become concerned and has appointed a committee to study the crisis. Being so unexpected and pressing, the problem has forced college officials to try many experimental procedures. Pre-enrollment is one of those experimental procedures and at the present time, is a rather controversial issue. Whether or not it is the answer most likely will not be decided until it has run the test of time.

Pre-enrollment does not merely change the mechanics of enrollment—it may, and most likely will, force some changes in various policies of both the administration and faculty. Therefore, one strong deterrent to the adoption of pre-enrollment exists where there is rigid faculty control over policies, mostly because it is often difficult to inform the faculty of all the problems to such an extent that they will weigh procedures over policies. It is my belief that as enrollments in colleges and universities begin the expected rather rapid climb upward, there will develop again the pressure for new methods and procedures for handling mass enrollments, and pre-enrollment will be considered by more colleges and universities. I believe that pre-enrollment will prevail on its own merits, and my purpose is to discuss those merits. Pre-enrollment being rather new, there is little printed material available on the subject. Therefore, this article covers the merits of the pre-enrollment procedures at Oklahoma A & M College.

The success or failure of a pre-enrollment system on your campus cannot be predicted from the success or failure of its use on another campus. I know of no other word that is so commonly used and yet varies so greatly in its definition as the word "pre-enrollment." To some colleges, pre-enrollment means any sort of student contract prior to the regular enrollment days. To other colleges it means any prep-

aration in the Registrar's Office in advance of the enrollment period. At Oklahoma A & M College, pre-enrollment means the actual enrollment of students prior to the regular enrollment days. Since the value of pre-enrollment is frequently questioned, I would like to list and discuss briefly some of the arguments most often encountered. I may be accused of being biased in my presentation. In my identifications, I do not feel that I have been, but in my discussions I will agree there may be room for some argument. However, I should like to say that any bias I show is influenced by my experience at Oklahoma A & M with eight years of the two-or-three-days' fieldhouse type of enrollment and with five years of pre-enrollment.

SOME ARGUMENTS FOR AND AGAINST PRE-ENROLLMENT

For:

1. Eliminates long lines.

By permitting our students to pre-enroll, we are able to complete the enrollment of some 80 to 90 per cent of our students prior to the regular enrollment days. Seldom do we have a line of more than 50 students.

2. Encourages students to contact the college early.

Approximately 95 per cent of our students visit our campus and discuss their enrollment prior to the regular enrollment days. Rush work in evaluating incoming transcripts is reduced tremendously.

3. Creates good public relations.

All during the summer months, 50 to 100 students visit our campus daily to pre-enroll. Many times the parents accompany the students, and together they become so acquainted with the campus and its personnel that pride and confidence replace the fear and doubt that are often so prevalent in their minds when they first arrive. They visit our dormitories, eat at our cafeterias, discuss any health problems with the doctors in our infirmary, become acquainted with their advisers, and jointly work out their class schedules. The personal interest shown to these students and their parents by our faculty cannot be overrated as a factor in creating good public relations.

4. Enables a few competent advisers to do more of the advising.

Since most of our upper-division students will have been advised by their regular advisers during the semester, one or two competent advisers in each dean's office are able to advise the students who visit our campus during the summer months.

5. Makes possible the adjustment of departmental errors in estimating course needs.

By keeping the department heads informed throughout the pre-enrollment period of the advance enrollments in their courses, they are able to adjust their offerings to fit the needs. Some courses may be canceled while others are added or maximums increased.

6. Reduces amount of overtime required to distribute enrollment information.

By processing the enrollments as they are turned in early, a minimum of overtime is required to distribute all enrollment information the first day of classes to those departments concerned.

7. Eliminates the need for enrolling students by block appointments.

You can readily see that a consistent and even flow of students throughout the pre-enrollment period will spread the mechanics of enrollment so that there is no need to require students to make appointments. You may ask how we get the even flow. I can only say that for five years we have had an even flow of students all during the summer months without any controls on the part of the college.

8. Maintains an equal chance for students to choose desirable sections.

All students are given the opportunity to pre-enroll. They are free to ask for the popular sections, and they expect to be and are assigned to those sections on the basis of first come, first served.

9. Allows time for the counseling of individual students.

Advisers find that they have more time to spend with the individual student. They have time to discuss more than just the mechanics of enrolling. It is not uncommon for an adviser to spend as much as two hours with a new student and his parents.

10. Increases accuracy in the mechanics of enrollment.

By spreading our enrollment, we are able to spend more time in checking the students' enrollment material, and we are able to use our regular clerks to do most of this checking. Because of this extension of time, we are able to permit the students to fill out only one enrollment card, and we duplicate those cards in the number we desire.

11. Eliminates faculty participation in the mechanics of enrollment.

By spreading our enrollment over a longer period of time, we are able to use our regular clerks to a larger extent, and when we do need help we need only a few additional clerks; for this we

hire faculty wives. Our faculty members do not participate in the mechanics of enrollment, except as student advisers.

12. Boosts student morale.

Ask college officials about the morale of their alumni or their football team and they become interested—but student morale, that is something else. If you should be interested in boosting your student morale, I suggest that you make it possible for your students to enroll by filling out only one card, without standing in long lines, and without forcing them to enroll at the convenience of the college.

13. Helps department heads to determine their faculty needs.

On the basis of five years of experience in pre-enrollment, we are able to determine accurately by the first of August whether our estimate of expected enrollment was too small or too large. Service departments such as chemistry, English, and mathematics, whose faculty needs may change drastically if the freshman enrollment increases or decreases materially from the expected, are usually able to adjust their number of graduate fellows to fit the need.

Against:

1. Pre-enrollment costs too much.

It is almost impossible to allocate properly the true costs to an enrollment process. Therefore, it is extremely difficult to determine just how much any enrollment system may cost. The actual cost for the additional labor that we require each semester is less than \$1,000. But in evaluating this cost you must remember that our faculty is not involved in any way with the mechanics and that we have no expense in setting up the fieldhouse with tables, stalls, runways, signs, and all the other preparations that are required.

2. Requires advisers to be available throughout the summer months.

Pre-enrollment spread over the summer months does require advisers to be available during those months, but because of this spread one or two advisers in each dean's office can advise all the students.

3. Takes too much control away from the department heads.

This seems to be the greatest fear of pre-enrollment. Actually little if any control is taken from the department heads. They still determine the courses they offer each semester and the meeting times of those courses. They also set the maximums for their sections, and those maximums are increased only with their approval.

4. Results of placement tests are not available for your new students.

We have found that the information gained through spending more time with the students, and in many cases with their parents discussing the students' capabilities, limitations and high school records, offsets any information that may be lost by not having the results of the placement tests. Of course, the ideal situation would be to have the scores on the placement tests and the ample time for advising that is made available through pre-enrollment. My recommendation would be to have the placement tests given in the high schools during the senior year, under the supervision of a central state agency, and the scores made available to all colleges in the state.

5. Requires faculty to advise students during the semester.

Actually this is a criticism that will prevail on any campus. At A & M, some faculty members do not want to be bothered with anything during the semester but teaching. However, we find that in most such cases the teacher does not want to advise at all and complains about the job of advising even during the regular enrollment days. Some of our advisers want us to limit the period for pre-advising to one or two weeks, whereas others want us to extend it over the entire semester.

6. Causes more drops and adds.

Because this was a prevalent belief among most of the personnel at Oklahoma A & M College at the time we adopted pre-enrollment, we made careful comparisons between the drops and adds under pre-enrollment and those under our old fieldhouse-type of enrollment. We found that the students make slightly fewer changes under our pre-enrollment system. One reason for this, I feel sure, was that under the old system our course offerings were so much out of line with our needs that our students were unable to get what they wanted during enrollment time, and they continued to try to get those courses after classes began. Under our system of pre-enrollment, adjustments in our offerings can be made much more easily and sensibly than was possible under our old system.

Whether or not my discussion of the "pro and con" of pre-enrollment, based on five years of experience at Oklahoma A & M College, can be used as a reliable criterion for the prediction of its success or failure at your campus may depend upon whether or not our system, or a modified one, can be adopted by your institution. In order for you to decide better, I will describe the system of pre-enrollment that is in use at Oklahoma A & M College.

PRE-ENROLLMENT AT OKLAHOMA A & M

Schedules come first. During the last of February of each year, the Schedule Committee meets and determines the dates and procedures for printing the fall and spring schedules. The department heads are asked to submit their listings for both the fall and spring schedules at the same time. Both schedules are printed and released in April. Since pre-enrollment is practically the same for both semesters, I shall restrict my discussion to the pre-enrollment for the fall semester. The Sectioning Committee designates one week near the last of April as advisement week. All students who are currently enrolled are permitted to meet with their advisers and make out their trial schedules for the fall semester. Students are urged to plan their schedules carefully and to turn them in only after they have considered all factors that may cause need for a change. They are warned that any request for a change may cause a forfeit of their privilege to pre-enroll. The student gets his adviser's approval on his trial schedule and turns it in at his dean's office. There it is numbered in the order in which it was turned in, and kept in that order.

Preparation in Registrar's Office. While the students are studying the class schedule and making out their trial schedules, and for a week or two prior to this period, the Registrar's Office is busy setting up class cards to be used in the actual sectioning. We have on file in the Registrar's Office a master IBM card for every course that has been approved by our Regents and has not been dropped. These master cards contain the course title, course number, and course description. We pull from these master cards the card for each course that is listed in the fall schedule. Since there are varying numbers of sections for each course, and since some laboratories are sectioned separately from the theory, we expand our deck of master cards to include one for every section of theory and laboratory that needs to be sectioned. Here, I would like to say that every class must be sectioned even though the size of the class is to be unlimited and there is only one section of the course being taught. This is necessary because the card that we pull to assign the student to his section becomes his class card in that class.

Size of classes determined by the department heads. Through the use of this expanded deck of master cards and the IBM tabulator, we prepare in duplicate for each department head a list of the laboratory and theory sections offered by his department. The department head

is asked to verify the list with his offerings in the schedule and to indicate beside each section of laboratory and theory the maximum number of students that he will permit us to enroll in that section. The department head is requested to keep one copy of this list for future reference and to return the other copy to the Registrar's Office. We correct any errors in our master deck that the department heads may have noted on the lists, and then punch the numbers they gave as their maximums into the appropriate master cards. We now have in these master cards the department, course number, section number, course description, and the number indicating how many class cards are to be made. We also punch into these cards the word "maximum" or "unlimited," thus indicating whether or not more cards may be made. Through the use of this master deck and various IBM machines, we are able to reproduce mechanically this pre-determined number of class cards for the various sections. We place these cards in trays in alphabetical order by department, and in numerical order by course number and section number within the departments. The regular IBM tab cards are used to index them for convenient and fast pulling. We have experimented with both trays and pigeonholes for pulling the cards and find the trays much better.

The actual sectioning. By the end of the pre-advisement week the deans will have collected some 5,000 trial schedules. Each dean's office will have its trial schedules numbered in the order in which they were turned in. We pick up these trial schedules from all the deans' offices and merge them into one numerical group by the numbers stamped on them by the deans. The trial schedules numbered "1" are merged together and sectioned first, those numbered "2" are merged together and sectioned second, and so on. Our students know that we section on the basis of first come, first served, and they turn in their trial schedules accordingly. We hire faculty wives on the hourly basis to do the actual sectioning. The same ones are hired semester after semester, and they become very proficient in this work. They are seated in front of the trays—usually the trays containing the same courses semester after semester so they will become more familiar with the courses they are sectioning. The clerk at the head of the line, sectioning, say "Accounting" through "Botany", will pull class cards from her trays for those courses as they appear on the trial schedules. She will place the class cards inside the trial schedule and check the courses on the trial schedule in red, indicating that the courses checked

have been sectioned and that the class cards are inside. She will then pass the trial schedule to the next clerk who will follow the same procedure, say from "Botany" through "Civil Engineering." The trial schedules are passed on down the line in this manner until all the courses listed on them are sectioned. They are then proofread to see that the proper class cards have been pulled and are inside. After some 4,000 of the trial schedules have been sectioned, we begin to run into some trouble with closed sections. We section the students on the principle of first come, first served, and, naturally, all of the desirable sections close first. One might wonder how it is possible to permit some 5,000 students to turn in trial schedules without any restrictions on their requests for the desirable sections and still be able to section even one-half of them. Surprisingly enough, we are able to section over 95 per cent of them. Of course, our section clerks have the authority to juggle sections on the student's trial schedule if it is necessary in order to enroll the student in all the courses that he has requested.

In my opinion this philosophy of first come, first served is absolutely essential to a successful pre-enrollment system. You must have the co-operation and participation of your students, and to do this you must keep faith with them. Some schools have broken faith with their students by juggling sections on their trial schedules just in order to keep the various sections in balance. Other schools have tried to save back 10 to 15 per cent of each section for problem cases that may arise during the regular enrollment days. Either method is due to fail. If your students know that they have no better chance of getting the sections that they want by turning in their trial schedules early, they can see no advantage in participating in the pre-enrollment program, and very few of them will participate.

The trial schedules that we cannot section in all the courses requested because of closed sections are accumulated. With all of these trial schedules before us, we have an accurate count of how many more places we need in various courses. Of course, we have some trial schedules that we could not section even by juggling the sections, even though we still have plenty of places left in some sections of each of the courses listed on the students' trial schedules. We sometimes encourage the department heads to increase their maximums to take care of these few cases, but only if we feel that they have underestimated their over-all needs in the courses and will need to increase their maximums or add additional sections later.

Keeping the department heads informed. As soon as we have sectioned the some 5,000 trial schedules, we notify the department heads of the advanced enrollments in their various sections. With the master cards, which indicate the number of class cards that were made for the section, and the class cards that are left in the section, it is a simple matter through the use of the IBM tabulator to prepare a list for each department head showing the pre-enrollments in each of his sections. Along with this list, we furnish the department heads some statistics on how both the over-all enrollment and the enrollments in his courses compare with those enrollments in past years for similar periods. We may even suggest that some courses be canceled and that either limits be raised in others or new sections added. If the department heads increase some limits or add new sections, we make a second effort to section those trial schedules that we were unable to section completely. If we are still unable to section all of them, we notify the students to come in and with their advisers' approval make some course change. Such notices are sent out to less than four per cent of the students who turn in trial schedules. Although we restrict the pre-advisement period for our currently-enrolled students to one or two weeks during the semester and the summer term, we permit out-of-town students to visit our campus any time and turn in trial schedules for the coming semester.

Keeping advisers informed of closed sections. As soon as sections begin to close, we make an effort to keep the advisers informed so that they will avoid using those sections in advising new students. Students who visit our campus during the summer months do not file their trial schedules with their dean. They personally take them to the sectioning room where they are sectioned. Any necessary adjustments are made before the student leaves the sectioning room. When a section clerk pulls the last card for a section, she also pulls the master card. If the master card indicates that the class size is to be unlimited, she sends it to the machine room where more class cards are made. If the master card indicates that the maximum has been reached, she places the card in the back of the tray. At the end of the day these master cards are collected and, with the use of the IBM machines, we prepare a list of closed sections on a ditto master. We then run as many lists as we need from this master. If the department head decides to re-open a section, the master card is pulled from the closed section deck and adjusted to show the new maximum. The additional class cards are made, and the master card and class cards

are filed back in the tray. Our next list of closed sections will not show the section as closed.

Informing our students. In order to reduce expenses and to save time for the college, we require the student to furnish us with an extra copy of his trial schedule and a self-addressed, stamped envelope. As the sectioning clerks make changes on the student's official trial schedule, she also marks the changes in red on the duplicate copy. During the first week in August, we use the self-addressed envelope and mail to the students who have turned in schedules a copy of their schedule with any changes we made, clearly marked in red. Also, a letter is enclosed, explaining the changes and why they were made. In the letter, we inform the student of the deadline for picking up his official trial schedule and warn him that unless it is called for by that deadline, it will be canceled and his class cards made available to other students. In the same letter, the student is told that if he finds it convenient to be on the campus any time before the deadline, he can complete his enrollment. Just before we announce to the students that they can complete their enrollments, we make a check with the various offices which may have need for holding up a student's enrollment. If we desire to hold up a student's enrollment, we withdraw his enrollment permit from his trial schedule and replace it with a note which sets forth the conditions that he must meet before he can complete his enrollment. His permit is held in the Registrar's Office until he presents evidence that the conditions have been met. I am sure that some of you will wonder why we wait until August before we permit students to actually complete their enrollment. Since we do not collect fees at the time of enrollment and do not require a deposit, we feel that if we permitted our students to complete their enrollment too early, too many of them would change their minds about going to college and wouldn't even bother to let us know. A college that collects fees at the time of enrollment could, in my opinion, begin accepting completed enrollments as early as desired.

You might be interested in knowing just what is required of the student to complete his enrollment. The student merely must call at the Registrar's Office for his official trial schedule, fill in his name on the class cards that are filed inside the trial schedule, and fill out an enrollment sheet. This can be done in approximately 10 minutes. The enrollment sheet is a sensitized master, and we dupli-

cate through the multilith process as many copies on IBM cards as we need to furnish the various departments that are authorized to receive such information. At present we are duplicating nine copies. Our enrollment procedure from this point on is pretty much standard procedure. We use IBM machines quite extensively in our mid-semester grade reports, final grade reports, class rolls, posting to the permanent records, student directory, fee billing, student accounts receivable, and the various statistical reports that a registrar is normally called on to furnish.

I would like to say that pre-enrollment has not solved all our enrollment problems. It has even created a few new ones. But, after five years of pre-enrollment, a poll of our faculty, students, and administrative officials shows that pre-enrollment at Oklahoma A & M College is here to stay.

SUMMARY

For a specified period during the semester, students who are currently enrolled are permitted to meet with their advisers and turn in their trial schedules for the next semester. These trial schedules are numbered by the various deans in the order in which they are turned in by the students. At the end of the pre-advisement period, the Registrar collects these trial schedules from the various deans and merges them into one numerical group by the numbers placed on them in the deans' offices. The trial schedules are sectioned in that order. The department heads are requested to furnish the Registrar with the maximums that they will allow in each of their sections of theory and laboratory. The Registrar pre-punches class cards for the various sections in the quantity requested by the department. Faculty wives are hired to do the actual sectioning by pulling these class cards and placing them in the trial schedules. When it becomes impossible to section a student in all of the courses listed on his trial schedule, even by juggling his sections, and it is not feasible to increase maximums due to ample places left in other sections of the courses, we contact the student and have him make the necessary course changes. During the summer months from 50 to 100 students, many of them accompanied by their parents, visit our campus daily to pre-enroll. These students follow the same procedure, except that they do not leave their trial schedules with their dean. They bring them in person to the Registrar's Office, where they are assigned

sections while they are present. Students and advisers are furnished information on closed sections. These lists of closed sections are prepared through the use of the IBM tabulator, using the master cards that are pulled by the sectioning clerks as the sections close. During the first week in August we notify all students that they may complete their enrollment any time they find it convenient to visit our campus. All trial schedules not called for by a specified deadline are cancelled and the class cards are made available to other students.

September's Non-Arrivals

ARTHUR A. HITCHCOCK

NON-ARRIVALS are phenomena on the admissions records of every college and university. The prospective student who has been accepted and who fails to arrive on the campus despite his apparent intentions is well known to secondary school principals as well as to college officials.

State universities are more vulnerable than private colleges to the non-arrival. At the University of Nebraska we have endeavored to discover: (1) some of the peculiarities, if any, of non-arrivals that distinguish them from arrivals; and (2) the reasons for their decisions not to enter the University as they apparently had planned.

The investigation was made through the 225 students who applied for admission to the freshman class of the University of Nebraska for September 1951, who completed all of their admission papers and were admitted to the University, but who did not arrive on the campus. The total number of completed, new freshman applications was 1638. The 225 persons in this study represent 13.8 per cent of the total number of applicants for the freshman class in September 1951. Subsequent verification studies were made in 1952 and 1953. These studies confirmed the conclusions of the 1951 group. Only the 1951 students are included in this paper.

SOURCES OF DATA

Data were available for all of the students from:

1. The student application blanks.
2. The transcripts of scholastic achievement from the secondary schools, occasionally including standardized test results.
3. Personality ratings accomplished by staff or faculty personnel in the secondary school.
4. Results of University pre-registration tests or Regents' Scholarship examinations.

A fifth source of data was added, namely, a questionnaire. This was a simple letter questionnaire sent to each of the 225 students who applied but did not reach the campus. Within the letter the students were asked three questions:

1. What are you doing now?
2. What happened to change your plans to enter the University?
3. When did you decide not to come to the University?

From the 225 students, there were returns from 158, or 69.7 per cent. The 158 students who became the final subjects in the study are referred to as the *non-arrivals*. Those who failed to respond to the questionnaire do not differ from those who did respond. In every category in which there were enough non-respondents to run comparisons, it was found that there were no significant differences between the respondents and the non-respondents.

FINDINGS

Who Are They?

The ratio of men to women among the 158 is two to one, exactly the same as the ratio among students who arrived. Beyond this similarity, who are the students who applied for admission and never reached the University? Some answers are found in the school and community backgrounds of the students, in their home backgrounds, and in their academic backgrounds and abilities. These three backgrounds will be discussed.

School and Community Backgrounds: (1) Size of the High School. The students were divided into four groups according to the size of high school in Nebraska from which they graduated. The sizes are:

- A more than 380 students
- B 162-380 students
- C 72-161 students
- D fewer than 72 students

In comparing the non-arrivals with 1158 students who arrived on the campus, it was found that the largest difference for any size of high school was 2.4%. Clearly, non-arrivals are not distinguished by coming predominantly from any particular size of high school.

School and Community Backgrounds: (2) Distance from the University. The non-arrivals were compared with 1310 arrivals on the basis of the distance of their homes from the University.

The first point is the similarity, in proportion, of the Nebraska non-arrivals with the Nebraska arrivals. There is very little to distinguish Nebraska arrivals from non-arrivals.

The second point is the difference for the out-of-state students.

Among the arrivals, 9 per cent were from out-of-state homes, but among the non-arrivals, out-of-state students form 25 per cent of the total. Stated in other terms, 91 per cent of the arrivals came from Nebraska, but only 75 per cent of the non-arrivals were from Nebraska. This is a significant difference.

Considering the total number of new students, 1412, it is found that 129 were from out-of-state; adding the 40 non-arriving out-of-state students makes 169 out-of-state applicants. It may be expected that 76 per cent of the out-of-state applicants will arrive on the campus, and 24 per cent will not arrive. For applicants within the state of Nebraska 91 per cent will arrive and 9 per cent will not arrive.

Many of the out-of-state applicants are within a radius of 125 miles. Their failure to arrive appears to be more a matter of out-of-state status rather than distance.

Home Background: It is possible to make estimates of the home background of the students on the basis of information provided in the application blank. The three bases of information about the home background are: financial need of the student, the father's occupation, and the affiliation with the University indicated by the previous attendance of relatives of the applicant.

Home Background: (1) *Financial Need.* According to information provided on the application blank, the financial need of students was determined to be:

Great need: student must earn \$600 or more per year

Average need: student must earn \$300-\$600 per year

Negligible need: no financial assistance or not more than \$300 per year

In comparing non-arrivals with a random sampling of 55 arrivals, it was found that 11 per cent of the non-arrivals had great financial need, but only 4 per cent of the arrivals could be placed in this category. The non-arrivals were characterized by much greater financial need than those who arrived.

Home Background: (2) *Father's Occupation.* The occupations of the fathers were classified according to the groupings in the Dictionary of Occupational Titles, and they were compared with a sampling of 100 arrivals. Two points of difference are especially noteworthy: (1) a much smaller per cent of non-arrivals has fathers who are in the professional and managerial group; (2) a much larger per cent of non-arrivals has fathers who are in skilled occupations.

Did the non-arrivals who attended other four-year colleges come largely from parents in professional and managerial occupations? These parents, plus many in the agricultural group, are generally in a financial situation favorable enough to permit them to send their children to college. The occupations of the fathers of the non-arrivals who attended other four-year colleges were compared with those who did not attend, and with those who did arrive.

It was found that non-arrivals who attended other four-year colleges correspond very closely with arrivals whose fathers are in these occupations:

Professional and Managerial
Clerical and Sales
Semi-skilled Occupations
Unskilled Occupations
Retired, Deceased, Unknown

They correspond to non-arrivals who did not attend college in:

Skilled Occupations
Semi-skilled Occupations
Unskilled Occupations

Non-arrivals who attended other four-year colleges correspond, in fathers' occupations, more closely to arrivals than to non-arrivals who did not attend other colleges. Particularly important is the close relationship in the categories of professional and managerial work and of clerical and sales work.

In summary, non-arrivals do show a difference from arrivals in the occupations of the fathers. Non-arrivals who attended other four-year colleges, however, show a greater similarity to arrivals than they show to non-arrivals who did not attend other four-year colleges.

Home Background: (3) Relatives Who Attended the University. It is difficult to determine the significance of attendance at the University by members of the applicants' families, as an isolated element. In a sampling of 100 arrivals, however, 47 per cent had relatives who attended the University. Among the non-arrivals, only 22 per cent had relatives who attended.

Academic Background and Ability: (1) Rank in High School. Rank in high school is stated in terms of the quarter held by the student at the time of graduation from high school. The non-arrivals were compared with 1412 arrivals.

The non-arrivals differ from the arrivals in the smaller proportion who graduated in the top quarter of their high school class, and the larger proportion graduating in the lowest quarter.

A persisting question is: do the non-arrivals who attended other four-year colleges differ from the other non-arrivals? Of the 50 students in the top quarter of their high school class, 29, or 58 per cent of them, went to other four-year colleges. Among those in the second quarter, fifteen, or 31 per cent, attended other four-year colleges. Eleven, or 37 per cent, from the third quarter attended other four-year colleges. Five, or 20 per cent, from the fourth group attended other four-year colleges.

Omitting eleven who attended other four-year colleges, but for whom data are not available, it is found that 29, or 50 per cent, of those who attended other four-year colleges came from the top quarter of their high school graduating classes. Fifteen, or 25 per cent, of those who attended other four-year colleges came from the second quarter of their high school classes. Or, seventy-five per cent of those who attended other four-year colleges were in the upper half of their high school graduating classes. This corresponds very closely to the arrivals.

In summary, non-arrivals differ from arrivals in respect to rank in high school, with the non-arrivals showing lower ranks, generally, than the arrivals. Non-arrivals who attended other four-year colleges, however, are very similar to arrivals in respect to rank in high school.

Academic Background and Ability: (2) Mental Ability Testing. Three broad categories of ability were made on the basis of test results that were available:

High	I.Q. 120 plus
Average	I.Q. 110-119
Below Average	I.Q. 109 minus

In comparison with 1229 arrivals, it was found that the arrivals have a higher proportion of persons with higher ability, whereas those who do not arrive are likely to have a smaller proportion of persons of high ability.

There is another point of significance regarding the students who attended other four-year colleges. Eighty-five per cent of those who attended other four-year colleges were average or higher in general

mental ability. In other words, those who attended other four-year colleges were largely of average or higher ability.

In summary, non-arrivals tend to be lower than arrivals in mental ability as measured by tests. Non-arrivals who attended other four-year colleges, however, are similar to, or surpass, arrivals in level of ability.

Academic Background and Ability: (3) High School Program. Seventy-five per cent of the students were in an academic or college preparatory program. The major proportion of the non-arrivals had the work in high school that is normally expected of persons who go on to college. Arrivals show a slightly larger proportion in the academic curricula, but the difference is not significant. Of those who attended other four-year colleges, only nine had had non-college preparatory curricula.

What They Planned and What They Are Doing

College Declaration: All of the 158 non-arrivals had stated their initial college intentions.

In comparing the arrivals with the non-arrivals, there is very little to distinguish them. The largest difference in any college group is three per cent.

Present Status

All of the non-arrivals had some intentions, however slight in individual cases, of entering the University. It is interesting to find, then, what these prospective students are doing instead of attending the University. Table I gives this important information.

TABLE I
PRESENT STATUS OF NON-ARRIVALS

Status	Number	Per Cent
Four Year College	69	43
Junior College	6	5
Vocational School	3	2
Nurses Training	4	2
Employment	56	34
Armed Forces	12	8
Ill	1	.5
Housewife	1	.5
Unknown	6	5
Total	158	100.0

Most of the non-arrivals are in training or are working. Among those in training, the most significant for this study are those who are in other four-year colleges. The sixty-nine students attending other four-year colleges divide up in this way:

Attending a Nebraska College	29
Attending an Out-of-State College	35
College Unknown	5

There are two important points. The first concerns the non-arrivals from out-of-state. Thirty of the forty out-of-state non-arrivals attended other four-year colleges, and twenty-six of the thirty attended out-of-state colleges.

The second point concerns Nebraska students. From 118 non-arrivals whose homes are in Nebraska, only thirty-nine attended other four-year colleges. They tended strongly to enter Nebraska colleges other than the University. And their homes are predominantly within 125 miles of the University, an area that contains most of the twenty-three smaller colleges of Nebraska.

The conclusion based solely on these subjects is that out-of-state students who do not arrive on the campus are likely to attend college, but the colleges are likely to be outside of Nebraska; Nebraska non-arrivals are less likely to attend other colleges, but for the one out of three who does attend another four-year college, there is a better than fifty-fifty chance that he will attend a college within 125 miles of the University rather than farther distant in the state or out-of-state.

It should be noted that non-arrivals whose homes are in Nebraska tend more strongly to go to work than to go to college.

Why Did They Not Arrive on the Campus?

Failure to follow through with intentions to enter the University is likely to rest in a complex of reasons. The situation is similar to withdrawal from college; for any individual there are many reasons. With our students there are, however, as in other cases, certain reasons that stand out most clearly in the minds of the students. These form the subject matter of this section.

The first consideration is the present status of the non-arrivals. Table I shows the status of these persons approximately three months after the opening of college in September. Omitting the unknown,

54 per cent of the non-arrivals are in training elsewhere than in the University. Thirty-seven per cent are working. Since a large proportion are in other educational institutions, let us consider these. The most important of this group, quantitatively, are the 69 who attended other four-year colleges. The outstanding reason for each of these is listed below.

<i>Reason for Non-Arrival</i>	<i>Number</i>
To be nearer home	12
Financial reasons	16
To attend a smaller college	5
Preferred another college	13
Could play athletics elsewhere	4
Course problems	4
Individual reasons	15
TOTAL	69

Two of the last fifteen did not arrive because they wanted to be farther away from home, rather than nearer!

The reasons listed above are the principal ones. They are closely interrelated for any individual. The four who could play athletics elsewhere, for example, decided to attend smaller colleges in order to play on varsity teams. For five others, the smaller college, in itself, was the outstanding reason.

The reason listed as "course problems" encompasses those situations in which the student would have been required to take certain elementary courses before embarking on the freshman work; or the student felt that courses he would not like were involved in his prospective program; or, he did not find the courses he wanted.

Those who entered junior colleges, vocational schools, and nurses training simply defined their needs more accurately as the summer progressed.

The non-arrivals who entered employment (56 in number) fell into two principal groups:

1. They needed the financial return from employment, or the financial return was more important than attending college.
2. They had obtained positions during the summer that they did not want to leave. The work was a more interesting prospect than college.

A few of the non-arrivals in the employed group had other reasons, but these were rare. Practically all of the non-arrivals who are employed gave as their reasons one of the two listed above. It must be recalled that the employed, as a group, have less ability for college work than those who attended other four year colleges, and their reasons for non-attendance must be viewed against this background.

At the University of Nebraska, the receipt of applications becomes heavy in March and continues until the opening of classes in September. It is to be expected, therefore, that decisions not to attend the University would develop strongly after February. Nevertheless, for those students who applied in March, almost as many decided after August 15 not to attend as decided before that time. Considering all of the non-arrivals together, it is found that 83 decided very late in the summer (August 15 through early September) not to attend the University. This amounts to 52 per cent of all of the non-arrivals. With the addition of those who made their decisions in the early part of August, 65 per cent of all of the non-arrivals are accounted for. There would be others among the "late deciders" from the thirty who did not state the time of their decision. If the persons who made their decisions in July are included, it is found that practically all of the non-arrivals are accounted for. The conclusion must be stated that non-arrivals made their decisions very near the time when they are forced to make the decisions.

CONCLUSIONS

Through the combined sources of information, answers were formulated to the questions posed at the beginning of this study. These follow.

1. Do the non-arriving applicants differ in any discernible particulars from the arriving applicants?

a. No differences were found in respect to the following points.

(1) Size of high school from which the applicants graduated had no influence on the decision not to attend the University.

(2) Generally, the distance of the applicants' homes from Lincoln does not distinguish arrivals from non-arrivals.

There is a great difference created by out-of-state status. One out of four out-of-state applicants will be a non-arrival, whereas only one out of ten Nebraska applicants will become a non-arrival.

This appears to be a matter of out-of-state status rather than distance from Lincoln.

(3) The high school program that the students pursued does not distinguish arrivals from non-arrivals. Arrivals show a very slightly larger proportion in the high school academic curriculum than non-arrivals, but it is not a significant difference.

(4) Non-arrivals are not distinguished from arrivals in respect to their plans for college majors. Any differences between the two groups are very small, and cannot be considered significant.

b. Non-arrivals differ from arrivals in the five respects that follow.

(1) Non-arrivals have much greater financial need than arrivals.

(2) Non-arrivals are distinguished from arrivals in respect to the occupations of their fathers. Non-arrivals have a much smaller proportion of fathers in professional and managerial occupations than arrivals. And a much larger proportion of the fathers of non-arrivals are in skilled occupations, as compared with arrivals.

There is, however, an important distinction. Non-arrivals who attended other four-year colleges correspond more closely to arrivals than they do to non-arrivals who did not attend other four-year colleges.

(3) Non-arrivals differ from arrivals in respect to relatives who attended the University. Forty-seven per cent of the arrivals had relatives who had attended and only 22 per cent of the non-arrivals had relatives who had attended the University.

(4) Non-arrivals, as a group, differ from arrivals in respect to rank in high school. Non-arrivals generally are from the lower ranks of their graduating classes.

Again, there is an important distinction. Non-arrivals who attended other four-year colleges are very similar to arrivals in respect to rank in high school.

(5) Non-arrivals, as a group, are slightly below arrivals in mental ability as measured by tests.

The non-arrivals who attended other four-year colleges, however, are similar to arrivals, or surpass them slightly, in level of mental ability.

From the foregoing it can be concluded that non-arrivals differ from arrivals in those aspects of their backgrounds that are most

closely identified with academic life. In other aspects, such as size of high school, no differences were found.

Although non-arrivals, as a group, show this distinction from arrivals, nevertheless, non-arrivals who attended other four-year colleges tend to be more similar to arrivals than to non-arrivals who went to work. It is apparent that many non-arrivals decided wisely not to attend the University. Many others who could have succeeded in the University, academically, however, decided to enter some other colleges.

2. Why do students decide not to attend the University?

a. Sixty-nine of the 158 non-arrivals entered other four-year colleges. They entered other colleges not because they had negative reactions about the University, but rather because other colleges presented some factors that were more positive in attracting them. The more important factors were: (1) to be nearer home; (2) financial reasons; (3) to attend a smaller college; (4) a preference for another college. Every student expressed one or more positive points that influenced his attending another institution. The influence was not a negative one forcing the student away from the University, but rather a positive one attracting him to another institution.

Thirteen non-arrivals decided to enter vocational schools, junior colleges, or nurses training. Their decisions were made in terms of more exact definitions of the directions in which they wished to go.

Fifty-six non-arrivals decided to go to work. Their decisions were reached in these terms:

(1) They needed the financial return from employment, or the financial return was more important than attending college.

(2) They had obtained positions during the summer that they did not want to leave. The work was a more interesting prospect than college.

Those who entered work are generally less able academically and have poorer financial resources than those who attended other four-year colleges.

Six of the remaining non-arrivals did not supply information. One is ill, and one became a housewife. Twelve non-arrivals entered the Armed Services.

3. Is there a particular time when non-arriving applicants decide not to attend the University?

Sixty-five per cent of the non-arrivals decided after the first of August that they would not attend the University. Practically all of the others made their decisions in July. It is evident that the decision not to attend the University is made near the time at which the decision actually is forced.

IMPLICATIONS

It is apparent that some students who did not arrive on the campus but who entered employment made a suitable choice.

A few students who entered employment merited assistance in attending the University.

Other students who attended other colleges, and who are capable of succeeding in college, might have continued their plans to enter the University if there had been a more personalized association with them during the summer when their decisions were made.

The state University is largely an instrument of the people of the state. Applicants from outside of the state are more likely to become non-arrivals than are applicants from within the state. Other colleges and universities probably experience a similar situation on a basis of state or regional limitation.

It is apparent that an obligation resides within the university and the high school to assist students more appropriately in making decisions regarding their entrance or non-entrance into higher education. There is a further obligation to meet on a common ground in assisting those students who need material aid to attend college, and who would profit greatly by attending college.

The personal association between the University and its prospective students appears to be very significant. Although not stated directly, nevertheless the implication is strong. Students are attracted by elements of other institutions that appeal to them in a positive way. In the free comments made by students in this study, it is apparent that the personal, individual approach to prospective students is associated with the proportion of non-arrivals. This very important point from this study undoubtedly has a wide application.

Vocational Aspirations of Seniors at North Carolina College: A Follow-Through Study

WILLIAM H. BROWN

INTRODUCTION

THIS is the fourth of a series of reports on a sample of 343 freshmen whose vocational aspirations were studied from year to year as they went through North Carolina College. Initiated in 1950-51, the investigation was undertaken to answer questions such as: (1) To what vocations do North Carolina College students aspire? (2) How stable are the vocational choices of these students? (3) Are the vocational choices of these students related to their choices of major curricula? (4) How certain are the students of their chances for pursuing their preferred vocations? (5) What do the students regard as the most persistent blocks to the pursuit of their preferred vocations? (6) What vocations do the students enter after graduating from college?

Reports on the first three years of the investigation revealed (1) a 34.2 per cent student mortality between the freshman and sophomore years for the 343 students used as subjects; (2) a tendency for the students to remain in school after surviving the first two years; (3) a concentration of students in three major curricula: commerce, biology, and social science, each area enrolling about 20 per cent of each yearly sample; (4) stabilities of choices of major curricula of 82 per cent between the freshman and sophomore years and 91.4 between the sophomore and junior years; (5) stabilities in vocational choices of sophomores and juniors of 68 and 72 per cent respectively; (6) teaching as the most prevalent first, second, and third choice of vocation over the three year period with 40 per cent of each sample expressing it as a first choice; and (7) a determination on the part of students to prepare for high prestige occupations in spite of powerful financial blocks and limited knowledge of their vocational aptitudes.¹

¹ Previous reports include:

William H. Brown, "Vocational Aspirations of Freshmen," *College and University* 27:2 (Jan., 1952), pp. 206-218.

METHOD OF SENIOR STUDY

Essentially the same questionnaire used in the freshman, sophomore, and junior studies was administered to members of the sample group who returned to the College as seniors. The questionnaire required students to indicate: (1) their first, second, and third vocational choices, (2) the degree of certainty of their first choice, (3) difficulties which stood in the way or otherwise limited their chances to pursue the first vocational choice, (4) major and minor programs of study, and (5) types of vocational counseling which the student had had and found helpful during his college career.² The responses obtained from the senior sample were compared with those obtained in the freshman, sophomore and junior studies.

DESCRIPTION OF THE SENIOR SAMPLE

During the fall quarter of 1953-54, 146 students or 42.5 per cent of the original sample of 343 freshmen returned to the College as seniors. The questionnaire was completed and returned by 139 seniors. Thus, the senior sample was 41 per cent of the original sample of 343 freshmen, and 84 per cent of the junior sample. Nineteen students or 11.5 per cent of the junior sample did not return to school and 7 students failed to return the senior questionnaire. The compositions of the freshman, sophomore, junior and senior samples by major curricular areas are given in Table I.

The table reveals a mortality of 59.4 per cent of the freshman sample by the senior year. Mortalities of 66.9 and 55, expressed percentagewise for men and women respectively, were found.

Only 41 of the 197 dropouts were reached by an inquiry regarding their educational status and plans which was sent to home addresses in October of 1954. Of these, eight were in the army, fourteen were not enrolled in any school, and nineteen had re-enrolled in another college. Ten of these not enrolled in any college were married and eleven planned ultimately to re-enter some college. Six

———, "Vocational Aspirations of Sophomores: A Follow-Up Study," *College and University* 28:1 (Oct., 1952), pp. 31-43.

———, "Vocational Aspirations of Juniors: A Follow-Up Study," *College and University* (Jan., 1954), pp. 232-243.

² Questionnaire adapted from form used by Robert Travers and Herman Niebuhr, "Vocational Choices of Freshmen Attending the City Colleges," Research Publications No. 6, New York: College of City of New York, Division of Teacher Education, 1950.

TABLE I
DISTRIBUTION OF CLASS SAMPLES, BY MAJOR CURRICULA, BY
NUMBER AND BY PERCENTAGE OF CLASS SAMPLES

Major Curriculum	Freshman		Sophomore		Junior		Senior		Pct. change between Fr. & Sr. yr.
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	
Commerce	66	19.2	37	18.3	30	19.9	29	20.9	-56.0
Biology	50	14.7	37	18.3	32	21.2	25	18.0	-50.0
Home Economics	28	8.2	18	8.9	15	9.9	17	12.2	-39.2
Social Science	40	11.6	15	7.4	12	7.9	11	7.9	-72.5
History	6	1.8	7	3.5	6	4.0	8	5.8	+24.0
Sociology	13	3.8	10	4.9	7	4.6	7	5.0	-46.0
Chemistry	25	7.3	11	5.4	8	5.3	7	5.0	-72.0
Physical Ed.	25	7.3	9	4.5	7	4.6	7	5.0	-72.0
Mathematics	22	6.4	15	7.4	10	6.6	6	4.4	-72.7
Fine Arts	17	4.9	9	4.5	5	3.3	6	4.4	-64.7
Foreign Lang.	9	2.6	7	3.5	6	4.0	5	3.6	-44.4
Health Ed.	11	3.2	6	3.0	6	4.0	5	3.6	-54.4
Political Sc.	—	—	4	2.0	2	1.3	2	1.4	—
English	18	5.2	11	5.4	3	2.0	2	1.4	-88.8
Nursery Ed.	—	—	2	1.0	1	.7	1	.7	—
Psychology	—	—	2	1.0	1	.7	1	.7	—
Undecided	13	3.8	2	1.0	—	—	—	—	—
Total	343	100.0	202	100.0	151	100.0	139	100.0	-59.4

of those who had re-entered college graduated on schedule, while nine were seniors, three were juniors, and one was a sophomore.

Changes in the number of students majoring in the several curricula between the freshman and senior years were greatest for English, mathematics, chemistry, and social science, all of which showed losses above 70 per cent. Since history alone gained majors during the four year period, and here the numerical gain was very small, the losses sustained by the various departments must be attributed mainly to drop-outs, rather than to changes in the students' choices of majors. That a cogent elimination or selection process operates during the freshman and sophomore years to keep the College enrollment more or less constant is highlighted by facts in the table. Commerce, biology, and home economics maintained the topmost ranks with respect to number of majors.

VOCATIONAL CHOICES OF SENIORS

Stability of Vocational Choices

How stable were the vocational choices of these students? Between the freshman and sophomore years, 68 per cent of the students made no change in their first vocational choices; between the sophomore and junior years, 72 per cent made no change; and between the junior and senior years, the first vocational choices of students were 100 per cent stable. Apparently, most of these students entered col-

lege with their minds made up as to the vocation they preferred to enter. Moreover, their aspirations seemed to change very little while they were in college. In view of the tenacity with which students hang on to their first vocational choices, it will be interesting to discover in a later section what these students actually did after college.

Vocational Aspirations

Throughout the period of the study, the vocational choices of the students reflected a strong preference for the same group of high prestige occupations. Undoubtedly, students come to college with a knowledge of vocations carrying high prestige and good pay and they set their sights on these occupations as a normal consequence of college graduation. Education is known to be one of the most effective keys to social mobility in American society. The extent to which students aspired to various vocations is indicated in Table II.

TABLE II
VOCATIONAL CHOICES EXPRESSED BY STUDENTS DURING CONSECUTIVE YEARS IN COLLEGE, BY OCCUPATIONAL AREA AND BY PERCENT OF SAMPLE EXPRESSING CHOICE

Vocation	First Choice				Second Choice				Third Choice			
	1951	1952	1953	1954	1951	1952	1953	1954	1951	1952	1953	1954
Teaching	44.6	43.6	43.1	47.5	30.9	31.7	35.8	28.1	21.8	19.3	28.5	18.0
Med. Professions	19.7	20.3	17.9	6.5	10.1	11.8	4.0	3.6		4.0	1.3	
Bus. & Clerical	9.3	14.3	10.6	12.9	10.0	16.8	19.9	18.0		7.5	8.6	15.1
Soc. & Recreation	6.4	8.8	9.9	7.9	2.9	5.5	10.6	8.7		2.5	4.0	7.2
Sc. & Technology			9.9	7.2			9.3	12.9			3.3	4.3
Domestic Arts	2.3	1.5	3.3	1.4	4.4	4.9	6.0	10.7		1.5	4.6	5.8
Lang., Lit. & Arts			.7	1.4			1.3	1.4			2.0	.7
Library	3.6	3.5	4.6	6.4	2.3	3.5	5.3	4.4		3.0	2.0	2.2
Misc.	14.1	4.5		4.4	17.9	5.0	2.6	6.4	39.5	2.0	1.3	1.4
Graduate School		3.5				3.5		.7		2.0		
Undecided					12.5	17.3	5.2	5.1	48.7	58.2	44.4	45.3
Total (Base)	100.0 (343)	100.0 (202)	100.0 (151)	100.0 (139)	100.0 (343)	100.0 (202)	100.0 (151)	100.0 (139)	100.0 (343)	100.0 (202)	100.0 (151)	100.0 (139)

The table shows that teaching was the most prevalent first, second and third choice of students throughout the period of the study. In the freshman, sophomore and junior years, about 44 per cent of the students listed teaching as their first choice of vocation. About 47 per cent of the seniors aspired to teaching positions. This liberal arts college offers education courses required for teacher certification but it does not offer a major in education. The data suggest that vocational aspirations of students force the college to function mainly in teacher education, other purposes notwithstanding.

The percentage of the class groups aspiring to careers in the medical professions remained fairly constant, around 20 per cent, until the senior year when it dropped to 6.5 per cent. Possible explanations of this decrease include: (1) the aspirants failed the medical aptitude test offered in the senior year, (2) a sizable number of aspirants for medical professions dropped out of school for one reason or another, and (3) some of the aspirants could not afford to prolong their school careers and decided to go into teaching until such time as they were able to enter medical school.

It can be seen that the percentages of students aspiring to business and clerical jobs tended to increase steadily between the freshman and senior years. About 13 per cent of the senior sample expressed a desire to embark on business or clerical careers. Essentially the same pattern can be discerned in the second and third choices of these students. While not so lucrative as teaching, business and clerical training leads to marketable skills and immediate employment for students upon graduation.

Throughout the four year period, the percentage of class groups aspiring to social and recreational jobs remained fairly constant. Some students in this group looked forward to positions as coaches and playground workers, while others planned to do post-graduate work in preparation for positions as social workers.

The area of science and technology, including laboratory technology and technological work in the various government agencies, was attractive to 7.2 per cent of the seniors. While the College offers no course as such for medical technicians, most of the students in this group aspired to such positions. The aspirations were expressed first during the junior year when some consideration was given by the College to the matter of offering courses in medical technology.

Library posts accounted for the first choices of 6.4 per cent of the senior group. The College offers courses leading to the position of teacher-librarian. Some of the students set their sights on this type of position while others planned to do post-graduate work in library science so that they might ultimately obtain employment as librarians.

Certainty of First Choices

Vocational preferences indicate what the student would like to do but not necessarily what he will be able to do. Sometimes a vocational choice reflects only the student's preference for a particular economic

or social status, and he may have little or no aptitude or potentiality for the preferred vocation. When the student is asked to indicate how certain he is of his chances to pursue his chosen vocation, he is likely to consider circumstances that may block the realization of his aspiration. Table III gives information on the certainty of the first vocational choices of the students under study.

By referring to the column headed "both sexes," an increase in the degree of certainty between the freshman and junior years can be observed. On the basis of responses in the senior year, one would

TABLE III
CERTAINTY OF FIRST VOCATIONAL CHOICES BY
PERCENTAGE OF GROUPS RESPONDING

Degree of Certainty	Percent of Groups Responding											
	Male				Female				Both Sexes			
	1951	1952	1953	1954	1951	1952	1953	1954	1951	1952	1953	1954
Certain	24	44	26	26	25	41	42	40	26	42	36	36
Reasonably												
Certain	37	29	42	43	32	28	33	32	34	28	26	35
Tentative	18	8	4	12	19	9	4	21	18	7	4	18
Uncertain	20	19	28	19	24	26	21	7	22	23	24	11
Total (Base)	100.0 (127)	100.0 (80)	100.0 (54)	100.0 (42)	100.0 (216)	100.0 (122)	100.0 (97)	100.0 (97)	100.0 (343)	100.0 (202)	100.0 (151)	100.0 (139)

expect about 36 per cent of the students, upon graduation, to enter their preferred vocations. The sharp increase in certainty after the freshman year may be attributed to some of the following reasons:

1. Academic success in the freshman year gave the students more confidence in their ability to succeed in their chosen vocations.
2. Individual and group counseling gave support to the student's aspirations.
3. Greater assurance of parental backing attended the successful completion of one year in college.

When the percentages for certainty and reasonably certainty are taken together for both sexes, it can be seen that 71 per cent of the seniors were at least reasonably certain of entering their chosen vocations. Certainty appeared to be highest in the senior year, as might be expected. Essentially the same pattern as that above may be observed in the data for the separate sexes, although the degree of certainty appeared to be uniformly higher for women than for men. The

possibility of being drafted for army service probably influenced to no small degree the amount of certainty among men.

Preferred Teaching Levels

Of the 124 seniors indicating teaching as one of their vocational choices, 90 preferred teaching in the high school, 29 wanted to teach in college, and 5 indicated a preference for kindergarten or elementary school work. Thus the bulk of these students aspired to teaching positions in high schools. Recent figures indicate that only 20 per cent of North Carolina's 7886 Negro teachers are employed in high schools and that there is a surplus of qualified secondary school teachers. Since the College does not offer courses for the certification of elementary school teachers, ample employment opportunities of these students will depend on teacher turnover in the North Carolina high schools, the possibility for employment outside the State, and an alert placement bureau.

Blocks to Pursuit of First Vocational Choice

Practically all of the students recognized at least one condition that might influence adversely their chances for entering their preferred vocation. Some students recognized two or more such blocks, particularly those students who dropped out of college before graduation. Table IV gives the extent to which certain factors were regarded as blocks by the four class samples.

After the freshman year, finance emerged as the most serious factor regulating the student's chances for entering his chosen vocation. Between 30 and 40 per cent of the responses highlighted finances as a possible block. When one considers that the average income of Negro families in North Carolina is \$1056.00 and that the estimated minimum cost for a year of schooling at North Carolina College is from \$1066.00 for boys to \$1155.00 for girls, the concern of students for adequate financial backing for their education is understandable.

Phearman, who studied graduates of a sample of Iowa High schools found that, although 80 per cent of the children of professional parents enrolled in college, only 18 per cent of farmers' and laborers' children did so. He found a comparable relation with respect to parental, particularly father's, education and an inverse rela-

tionship between family size and college enrollment.³

Inadequate opportunities to prepare for a preferred vocation persisted through the four years as a felt block for about 30 per cent of

TABLE IV
BLOCKS TO PURSUIT OF FIRST VOCATIONAL CHOICE BY CLASSES
AND BY PERCENTAGE OF TOTAL CLASS RESPONSES

Blocks	Freshman	Sophomore	Junior	Senior
Finance	28	40	36	33
Inadequate Opportunities to Prepare	30	30	27	29
Parental Encouragement	4	6	4	2
Knowledge of Aptitudes	38	18	33	28
Other Reasons				8
None		6		
Total	100.0	100.0	100.0	100.0

each sample. Students indicating a need for better opportunities probably felt that they were not acquiring the knowledge and competence that they felt were needed for success in their chosen vocations.

Throughout the study, parental encouragement seemed not to be an important block. Apparently, most parents gave their children all of the encouragement needed.

Knowledge of aptitudes persisted as a felt block for about 30 per cent of the student. Aptitude tests were given to students upon request but not too many students made requests for such tests. At any rate, the use of aptitude tests was not generally included in the academic counseling of students.

AFTER-GRADUATION ENDEAVORS OF SENIORS

What did the graduates actually do upon completion of college? To answer this question an inquiry was sent to the graduate's home address in October of 1954. Each graduate was asked what he was doing, how he liked what he was doing, what, if anything, had prevented him from pursuing his first choice of vocation, and what his plans were for the future. Supplementary information about the graduates was obtained from the Placement Office, the College Counsellor and the Dean of Women.

³ Leo T. Phearman, "Comparison of High School Graduates Who Go to College and Those Who do Not," *Journal of Educational Psychology* 40, (Nov., 1949), pp. 405-414.

The results of the canvass of 139 graduates for their after-college endeavors are given in Table V. It can be seen that 105 students or 75 per cent of the senior sample were accounted for. Thirty-seven students or about 27 per cent of the graduates actually entered their chosen vocations. Another 27 per cent found employment but their jobs were in an area unrelated to their vocational choice. Sixteen students or 11.5 per cent of the graduates were enrolled in some graduate or professional school. Fourteen students or 10.0 per cent of the graduates were unemployed.

TABLE V
AFTER-COLLEGE ENDEAVORS OF GRADUATES BY MAJOR AREAS

Major Area	After-College Endeavors					
	In chosen vocation	In unrelated vocation	In Grad. School	Unem- ployed	No Response	Sr. Sample
Commerce	13	10	4	2	0	29
Biology	2	7	3	3	10	25
Home Economics	5	2	1	1	8	17
Social Science	1	4	1	0	5	11
History	4	3	0	0	1	8
Sociology	3	0	2	1	1	7
Chemistry	0	1	2	1	3	7
Physical Ed.	2	3	0	1	1	7
Mathematics	2	2	0	1	1	6
Fine Arts	1	3	0	0	2	6
Foreign Language	1	0	1	2	1	5
Health Education	0	3	1	1	0	5
English	0	0	1	1	0	2
Other	3	0	0	0	1	4
Total	37	38	16	14	34	139

Forty-eight of the graduates who were unable to enter their preferred vocations mentioned the following deterrents: 17 found no vacancies, 10 were drafted, 9 found a new vocational interest, 5 married and an equal number lacked the financial support needed, and 2 felt that they lacked the ability to pursue their chosen vocations. Half of the sample of 50 students who responded to the question regarding the amount of satisfaction they were getting from their after-college endeavors were enjoying their jobs, but only 11 of the 50 graduates wanted to continue in their present positions. Practically all of the 50 graduates canvassed on the matter of their ultimate vocational objectives, reaffirmed their choices made in college.

Teaching, the most prevalent choice of this group of students, was of special interest. Sixty-six students or about 47 per cent of the seniors indicated teaching as a first choice of vocation. However, only half of this number actually entered the teaching profession. About a third of those who actually entered teaching did so because they were not able to realize their first vocational choices. It was significant that of the 33 teaching positions obtained by these graduates, only 13 were placed in North Carolina high schools. Negro high school teachers comprise only 20 per cent of all Negro teachers employed in North Carolina schools and the teacher turnover in high schools is probably very small.

When 50 graduates were asked how North Carolina College might be more helpful to students on vocational problems, practically all of them responded in considerable detail. Two-thirds of the students urged that definite arrangements be made for students to obtain vocational information, including the opportunities available in various fields, new opportunities, requirements of various jobs, and how to find a job. They felt that the acquisition of this information should not be left to chance. Almost half of the group urged that vocational aptitude tests be given to all students and that the results be discussed with individual students in conferences. Other suggestions mentioned by a few students included: (1) Provide for closer observation and guidance of freshmen, (2) Provide career workshops during which persons already employed in a field discuss the opportunities, requirements, and problems in the field, (3) Provide more detailed information about requirements of professional and graduate schools, (4) Encourage students to take the amount of mathematics needed for various vocations, rather than just enough to graduate, (5) Help students to find work opportunities on campus and during summer recess that relate to their vocational choices, (6) Expand the services of the Placement Bureau to include reports of vacancies and extent to which fields are overcrowded, (7) Provide more practical work in major curricula so that students will have more opportunities to apply the theory taught them, and (8) Encourage students more by telling them what they can do rather than what they cannot do.

SUMMARY

The results of this five year study strongly suggest that the group of students studied enter college with aspirations for high prestige

vocations. Ginsberg and his collaborators have reported that students characteristically use their high school grades to appraise their likelihood of vocational success in different fields.⁴ The Negro student probably uses, in addition, his knowledge of vocations open to him. Consequently, large numbers of these students set their sights on teaching, since the Negro public school is manned almost entirely by Negroes. However, a decreasing number of vacancies in the teaching profession, lack of finance for graduate study in professional schools, and failure to meet entrance requirement of professional schools force many graduates into unskilled work.

The number of students eliminated from the sample of this study because of failure to achieve in college as well as the number who are not able to find jobs upon graduation from college suggests an undesirable wastage of human resources that North Carolina can ill afford. This study strongly suggests a need for further study of possible factors in the student's transition from high school to college that may be influencing his failure to achieve in college. Since census figures indicate that the percentage of the adult Negro population in North Carolina obtaining college training rose from 1.5 in 1940 to 2.6 in 1950, job placement and job satisfaction studies of Negro college graduates seem to be indicated as a possible basis for advising the college-going population.

The vocational motives of students who enter college and the realities of a world of work in which every person must engage in productive work in order to survive, clearly reveal the ideal of liberal and general education, untainted by vocationalism, as one which exists largely in the imagination of conservatives.

⁴ Eli Ginzberg and Others, *Occupational Choice*. New York: Columbia University Press, 1951.

Do American Colleges and Universities Encourage Their Faculties and Students to Participate Actively in Politics?

HOWARD WHITE

NATIONAL organizations which I had supposed could furnish information have compiled no data on rules concerning faculty and student participation in politics.

The Association of American Universities issued a lengthy statement in 1953¹ opposing communists in the teaching profession while upholding freedom of thought and speech. Apparently the Association does not see a need for safeguarding democracy from communism by asserting the right of teachers and students to serve as exemplary citizens participating actively in politics. This subject has not been on the Association's program.²

Even if the subject is deemed inappropriate for the Association of American Universities, it might seem that state universities are directly concerned with effective training of young citizens and that such concern would be evidenced by studies of how member institutions conduct such training. The National Association of State Universities has no information on regulations of its members governing student and faculty participation in politics.³ However, "Political Activities of Staff Members" was discussed at the 1952 meeting of the Council of Presidents of the Land Grant Association.^{3a}

The American Council on Education has nothing to offer on this subject but suggested that the American Association of University Professors might have something.⁴ Although the latter has intervened

¹ The *Washington Post*, March 31, 1953.

² Letter from the President of the Association, President Harold W. Dodds of Princeton, April 7, 1953. "The Association of American Universities has never discussed anything about participation in politics by students or faculty."

³ Letter of April 30, 1953, from the Association's Secretary, Chancellor John D. Williams, University of Mississippi. Neither could he supply such information for his own university.

^{3a} Address of President Frederick L. Hovde, November 10, 1952.

⁴ Inquiry made by Executive Director Edward H. Litchfield, American Political Science Association, reported in letter to me, May 9, 1953.

when some institutions have discharged faculty members because of their political activity,⁵ it could not give any information as to the general situation in American colleges and universities.

The United States Office of Education has not investigated this subject. Its Chief for Social Sciences knows of two significant projects, financed by foundations, designed to stimulate political activity in schools and colleges.⁶

I have found no published, detailed analysis, and only a few general statements about the rules and practices of American colleges and universities with regard to active participation in politics by members of their faculties and by their students.

The Institute of Public Affairs, State University of Iowa, published in 1950 a report on *Partisan Politics on the Campus*, but this dealt with "policies regarding the appearance of political figures on the campuses of publicly supported institutions of higher learning in the United States."

Even this aspect of the general problem shows a widespread indifference, if not hostility, on the part of rule-making authorities toward this means of training young citizens. To the question, "Are political speakers freely allowed use of your facilities for the presentation of *per se* political speeches?" 175 institutions (42.36 per cent), answered with an unqualified "No." Only 49 (11.86 per cent) replied "Yes" unqualifiedly; and 105 (25.35 per cent) qualified their "Yes" with such conditions as "if invited by a campus group or other approved authority."⁷ The two "Yes" groups total less than the unqualified "No" group.

In *Preparing College Men and Women for Politics*, the second report made by Thomas H. and Doris D. Reed to the Citizenship Clearing House, affiliated with the Law Center, New York University, two paragraphs deal with our subject. Quoting in part: ". . . in many institutions there is opposition on the part of deans, presidents and trustees, to the young teacher taking an active part in politics . . . subtle but effective methods of discouragement are used. When the

⁵ Thomas H. and Doris D. Reed, *Preparing College Men and Women for Politics* (1952), p. 93. The specific reference is to an Evansville College case.

⁶ Letter from Howard R. Anderson, Chief for Social Sciences, April 22, 1953. The projects concerned with citizenship at the college level are: (1) the Kansas Study of Education for Citizenship, and (2) the Citizenship Education Project of Teachers College, Columbia University.

⁷ P. 9.

administration frowns many college teachers, especially the young who have not yet established themselves in public esteem, see their hopes for promotion, better pay and congenial relations with their superiors dwindling, and they stay out of politics."⁸ The report contains no supporting statistics to show how generally this situation prevails. Indeed, it would be difficult to report statistically on how often administrations frown.

Similarly, the American Political Science Association's Committee on Political Parties, in the 1950 Report, *Toward a More Responsible Two-Party System*, notes that, generally speaking, academic institutions "have stressed the virtue of civic participation in the community but in the main preferred such participation not too close to the campus itself." The Committee found that, "As direct participants in the political process, teachers of political science have not made the contribution one might have hoped for in view of the value of their specialized knowledge."⁹

There is no doubt that the "virtue of civic participation" is stressed by teachers of political science. Textbooks for American Government courses emphasize the need for college graduates in politics.¹⁰ In *Goals for Political Science*, the Association's Committee for the Advancement of Teaching reported, in 1951: "Students become good citizens when teachers inspire them to be such by example. . . . Instructors bring a living reality in the classroom when they themselves have experienced such flesh-and-blood realities. . . . Students learn to appreciate democracy only when they participate actively in common affairs; a pattern of activity early established is likely to last a lifetime, while one that is stimulated too late in life may never materialize."¹¹ The Committee's investigation led it to report that "There is far more 'practical' instruction in citizenship taking place in departments of political science than even most of the members of the profession realize."¹² But the Committee did not compile,

⁸ Pp. 93-94.

⁹ Pp. 82, 83. Supp., *Amer. Pol. Sci. Rev.*, September 1950.

¹⁰ An example: "Voting, even voting regularly and intelligently, is not enough. A citizen who has had the advantage of a high school or college education should take his place on the active list in the discussion of public questions, in political campaigns, and in urging upon government officials programs in the public interest." Claudius O. Johnson, *American Government, National, State, and Local* (1951), p. 996.

¹¹ P. 42.

¹² P. 36.

compare and analyze institutional rules and practices which might facilitate, or on the other hand, prevent active political participation by faculty and students. It did recommend that "Credit should . . . be given to the faculty member who makes available his talents to his community by active participation in public affairs."¹³ The implication is that, too often, such participation is not regarded as contributing to professional advancement.

Participation does not automatically make a person a wiser and better teacher, or a more intelligent citizen. As Andrew Nuquist, in his "Note on American Government Textbooks," states: "Participation does not necessarily lead to understanding, and action without understanding may have disastrous consequences. There is no question as to the ease with which action may be started. Millions of deluded Germans actively participated in the politics fostered by Hitler, Goering, Goebbels, *et al.*, seemingly without any comprehension or understanding of what it all meant."¹⁴

Obviously, participation is not enough. Neither is it enough to understand the principles of our governmental system and how the system works. Participation and understanding should blend in an effort to promote the general welfare. Too often what has been called training for citizenship has been confined almost exclusively to learning about our governmental system, with the confident assumption that students with such knowledge will, of course, put their knowledge to work in service for the community.

What has been the result? The findings of the survey of college graduates, published in the volume, *They Went to College*, shows that "whatever their political sentiments, Old Grads do little more than vote. Only 17 per cent are apt to make a campaign contribution; only 3 per cent ever tried to raise money for a campaign; only 6 per cent have held any elective office in recent years. The Old Grad seems to exert little direct influence on public affairs. Politically he appears passive."¹⁵

Who can blame him? He is following the example of his political science professor with whom he studied American Government!

From the time of the founder of the University of Virginia and assuredly from the time of one of the American Political Science Asso-

¹³ P. 262.

¹⁴ *Amer. Pol. Sci. Rev.*, June 1953, p. 568.

¹⁵ *Time*, April 7, 1952, p. 78.

ciation's early Presidents, Woodrow Wilson, there have been, and there still are, political scientists active in politics. Even among the numerous authors of textbooks on American Government, preoccupied as they are with writing and revising their volumes, there are those who have acquired valuable political experience. Marshall Dimock and Dean McHenry are two examples. But for political scientists generally, the pertinent question is, Why do we not practice what we preach?

Some may answer the question, conscientiously, in this manner: "I would like to take an active part in politics, but I have realistically analyzed myself and I find that I am not qualified. I would only be a handicap to the party to which I offered my services." Speaking perhaps from his own bitter experience, Harold J. Laski once wrote that "the teacher and the scholar are rarely a success in politics."¹⁶ And another, with political experience as a state legislator and as an administrator in Washington, has written: "Formal education does not suffice; two other requirements are essential. First, one must have developed a . . . philosophical insight and intellectual penetration. . . . The second requirement is that one must also possess certain human and social characteristics in order to be prepared for the rough-and-tumble of political life, where leadership is not merely a matter of intelligence but also of appealing to and working with people."¹⁷ Perhaps many of us conclude that we lack some of the required "human and social characteristics." That may be a valid conclusion!

On the other hand, we may avoid an explanation that involves a personal deficiency. We may assert that we are anxious to take an active part in politics, that we possess the necessary qualifications for engaging in such activity, but that the college or university which employs us will not permit us to retain our position, will not even give us leave without pay, in order that we may campaign for and, if successful, serve in an elective office of the county, or state, or in Congress. Therefore, we conclude, the sacrifice is too great. Regrettably, we let other citizens carry on the necessary political activity, represent us in the legislature and other public offices, maintain the vital functions of political parties.

To what extent is this a valid explanation? How generally are

¹⁶ "The Limitations of the Expert." *Fabian Tract* No. 235 (1931) quoted in William Ebenstein, *Man and the State*, p. 166.

¹⁷ Marshall E. & Gladys O. Dimock, *American Government in Action* (Rev. ed. 1951), pp. 400-401.

faculty members compelled to sever their connections with the institutions employing them if they enter the political arena? The American Political Science Association's Committee on Citizen Participation in Politics has been collecting information in order to provide a reasonably accurate answer. The Association's Executive Director, in June, 1953, asked departmental chairmen to send me information for their respective institutions. Not many have done so. Letters which I sent to a representative sample of colleges and universities brought replies in most instances. All told, the institutions replying number less than fifty; but they include state and private universities in most sections of the nation and several small colleges.

On the basis of the replies, several tentative generalizations can be made. Regulations of state colleges and universities are not uniform. Of the 25 responding, six require a faculty member to resign if he announces his candidacy for an elective county or state office or for Congress. Alabama is even more severe. It immediately severs his connection with the university. Several of the remaining 18 have had no occasion to formulate a rule, either because there have been no candidacies or because each instance has been treated as the current situation seems to warrant. A majority definitely does not require resignation. Among the institutions in this majority, leaves of absence are usual for campaigning and for filling an office when such activity interferes with normal academic duties. A leave of absence is not likely to be granted for more than two years. A larger majority permits faculty members to hold office in political party organizations without change of academic status. At least 16 of the 25 institutions have had faculty members or administrative officers seeking and some gaining elective political party or public offices above the municipal and school board level. All say that student political clubs are permitted, but on some campuses (UCLA, University of Illinois, Missouri, Washington) they cannot use university buildings for political meetings addressed by candidates for political office. Some of them forbid use of buildings only if meetings are public.

As might be expected, colleges and universities that are not mainly dependent on legislative appropriations have few or no restrictions on political activity of either faculty or students. However, if I may base a generalization on the small number of replies which contains such notable exceptions as Dartmouth College, Wesleyan (Connecticut) and Western Reserve universities, members of their faculties

have not taken advantage of their greater freedom from restrictions to engage actively in politics either by seeking office in party organizations or by campaigning for public office.

The tentative generalization concerning the lack of political activity in non-tax-supported colleges and universities is supported by the findings of the Reverend Robert C. Hartnett, editor of the magazine, *America*, and a member of the Association's Committee on Citizen Participation in Politics. Father Hartnett received replies to his question about faculty and student participation from six Catholic institutions. Only one of the six, Loyola University, has a formal regulation which might restrict political activity. Among the practices which "shall be regarded as a misuse of faculty status" its Statutes and By-laws include "the engaging in partisan political activity without expressly disassociating this activity from his activity as a member of the university. Authorization to engage in these practices must be received in advance and in writing from the President of the University."¹⁸ Evidently such authorization is not too hard to obtain since "various faculty members have worked and are working as party-organizers in minor capacities." Students have had their political clubs.

More serious than formal restriction is an unsympathetic administration, such as exists at the University of San Francisco. This university does not permit student political clubs, although there is no formal written rule against them. Several members of the faculty "in a rather 'sub-rosa' fashion participate indirectly" by encouraging persons not connected with the university to support certain candidates and issues and to see that voters register.¹⁹

Administrative policy at College of the Holy Cross holds it unwise to encourage student political clubs on the campus because "existing extra-curricular activities already" make such heavy demands on students' study time.²⁰ Only the religious faculty is precluded from active participation and at least one faculty member has served in the Massachusetts General Court. At St. Louis University, there is a definite policy of encouraging political participation by both faculty

¹⁸ Letter of Paul Woelfl, S.J., Dept. of Pol. Sci., Loyola U. to Hartnett.

¹⁹ Letter of Alphonsus Thomas Fiore, Ch'n, Dept. of Pol. Sci., University of San Francisco.

²⁰ Letter of George A. Higgins, S.J., Dept. of Pol. Sci., College of the Holy Cross. The policy is to encourage students who have the ability to affiliate with off-campus political clubs.

and students. Substantial political activity has resulted, without involving the university as a corporate unit.²¹

This survey of a small but fairly representative sample of American colleges and universities has shown that many of them, both public and private, permit faculty members to participate actively in politics. Why have so many political scientists confined themselves to teaching, ignoring opportunities to learn more about their subject by engaging in the activities they talk about, and write about so learnedly? Is it due to a feeling of personal inadequacy, as suggested above?

One political scientist who has been active in politics but has not sought elective office for himself holds the view that it is "the duty of the professor, as it is of other citizens in a democracy, to participate in the public affairs of his country, and there is no escape into 'neutrality.' In doing this he should realize, however, that his education and experience hardly make him a 'representative' citizen. One of the reasons I have not run for the legislature is that, though I might serve to the best of my ability, I am not truly representative of the people of this district and to be representative would be inconsistent with my scholarship—and it is a representative rather than a servant or public leader the people from this district want. . . . There is jealousy of the professor's education, ability, and prestige which results in the accusation that he is using his privileged position for unfair advantage in politics. But I do not see how a line can be drawn here."²²

Another political scientist, a member of the Association's Committee on Political Parties, did not accept the invitation to enter the primary of the party which was obviously not going to elect its candidate in the November election because, as he said, principally, he had "neither money nor inclination to spend on a losing race."²³ As to the general situation in his university, he says that "in spite of no rules, the present Trustees would not like to have any member of the Faculty run for important office, especially as a Democrat or worse, and there is still a feeling that he might suffer somehow. The Uni-

²¹ Letter of Paul G. Steinbicker, Ch'n., Dept. of Pol. Sci., St. Louis Univ. The other two from which information was obtained: Fordham University and Maryville College of the Sacred Heart.

²² Letter from Professor Warner Moss, Ch'n., Dept. of Government, College of William and Mary, June 16, 1953.

²³ Letter from Professor Clarence A. Berdahl, Dept. of Pol. Sci., University of Illinois, July 11, 1953.

versity Administration as such would not object, I believe, but being sensitive about Trustees' and popular reaction, would probably prefer that it not be done. . . ."

Administrators, particularly of tax-supported institutions, have to take account of "Trustees' and popular reaction." One may say, as does one political scientist, "I appreciate the difficult situation of the college president embarrassed before the legislature by faculty members supporting minority factions, but it is just part of the responsibility of the college president to live with such situations."²² This does not solve the problem if the college president, at the insistence of his board of trustees, declines the responsibility. The president of one state university explains his position. "For what it may be worth," he writes, "I would like you to know of a conclusion to which I came, after having gone through a budget season with the legislature when a member of our faculty was in the legislature. After the experience was over, I reached the conclusion that the best qualified member of our faculty for legislative service could not possibly be an asset to the University in the Legislature. . . . I am sorry that from a purely selfish standpoint—that of the University—I have such a dim view of the value of a faculty member, or other member or person employed by the University, serving in the legislature; for we do have many people who would render real service intelligently and conscientiously. . . . Without going into a discussion of my point of view and the reasons for it, I would much prefer not to have faculty members or other employees of our state universities in our legislature, when I have to carry the cause of the universities to legislative hearing rooms, etc. I think that it would be most unfortunate if there were any concerted effort on the part of the several state universities to see to it that members of their organizations were nominated and elected to legislative posts."²⁴

It may be taken for granted that there will not be a concerted action by the state universities to see that "members of their organizations" are "nominated and elected to legislative posts." Such action would be taken up and made a winning issue by other candidates. It would, moreover, indicate that state universities lacked faith in the merit of their claims for state financial support. Putting aside the possibility of concerted action, there remains the question whether a faculty member may not be a genuine representative of the people of his

²⁴ President George A. Bowman, Kent State Univ., Letter of July 16, 1953.

district, whether he may not be able to deal as impartially with the fiscal claims of the university which has employed him, as a lawyer, for example, serving on the judiciary committee of the legislature, and voting on bills relating to the bar association and procedure in court trials. In short, if a faculty member is to serve in the legislature, it must be as a representative of the voters in his district, not as a representative of the university. We may concede that the position of a member of his faculty, serving as a legislator, is likely to be embarrassing to the university's president when he appears before the legislative committee. It would seem, however, to be a secondary consideration; secondary to the fundamental principle of democracy that accords equality of opportunity and equal obligation to participate actively in determining the policies to promote the general welfare.

This fundamental democratic principle is not always accepted in practice. Perhaps it cannot always be applied. Perhaps, as another university president has said with respect to requests of faculty member for leave in order that they may campaign for state or national legislature, "no general conclusion may be arrived at *a priori*."²⁵ And still another, who is a political scientist, doubts "that there is a single correct answer to the problem of faculty participation in partisan politics."²⁶

Such considerations should not preclude full and free discussion.

²⁵ President Frederick L. Hovde, Purdue University, Letter of July 23, 1953.

²⁶ President Irvin Stewart, West Virginia University, Letter of July 16, 1953.

Admission Requirements of State Universities and Land-Grant Colleges

HOWARD KNUTSON

COLLEGE and university admission requirements have proved to be a fruitful source of studies and investigations since the establishment of early American colleges and universities. The subject is not a static one; it is replete with ideas and theories for improvement and change to keep pace with the dynamic concepts of the function of each of the different levels of education. College and university admission requirements need continual re-evaluation if they are to serve the best interests of the institution as well as the candidates for admission to these institutions.

Admission requirements vary greatly among the various institutions of higher education in the United States. This is to be expected since different functions are performed by the various types of institutions. State universities and land-grant colleges are supported by the people of the state and it is therefore imperative that such state-supported institutions serve the best interests of the citizens of the state and of society in general. There are, however, some fundamental disagreements as to the ways and means by which such interests are best served. Such differences of opinion often occur in regard to the admission requirements of these colleges and universities.

Admission requirements reflect the philosophy of the institution. A college or university with a philosophy based upon the tenet that only the best students of the state should be accorded the privileges of higher education will have admission requirements reflecting such a philosophy. On the other hand, an institution with a basic philosophy based on the belief that all qualified students who can benefit from higher education should be admitted, will have admission requirements reflecting that attitude.

Admission requirements have even wider implications for the high schools of the several states. Highly prescriptive admission requirements tend to circumscribe the curricula of the high schools of a state and to control the curriculum of the smaller high schools where the curricular choices are of necessity very limited.

The ultimate evaluation of the admission requirements of a college or university, however, should be in terms of their effective service to the students of the institution; their welfare should be the primary objective.

The author's investigation was concerned with admission requirements of the state universities and land-grant colleges of the United States, Alaska, and Hawaii. Among other things, the study surveyed current admission practices in these state institutions and analyzed the opinions of people working intimately with admission requirements on both the high school and college levels.

Of the 71 institutions surveyed, sixty-six (93 per cent) used the certificate or diploma of high school graduation as a primary method of admission. This was the most widely used of all the methods of admission. In many cases, however, it was not the sole requirement, but it was teamed with other methods. Fifty-two (79 per cent) of the 66 institutions using this method of admission required that the certificate of graduation must be from an accredited high school to be acceptable, or they applied additional requirements, such as satisfactory scores on achievement or scholastic aptitude tests, a required subject matter pattern, rank in class, or the recommendation of the high school principal. Twenty-four (36 per cent) combined a certificate of graduation with a required subject matter pattern as a dual requirement; two (3 per cent) combined a certificate of graduation and the recommendation of the high school principal; two (3 per cent) required examinations in addition to the certificates; and twelve (18 per cent) required the certificate in combination with two or more other criteria. Twelve (18 per cent of the 66 institutions) used the certificate or diploma of graduation as the sole basic requirement, but supplemented it by prescribing subject requirements for the various schools or colleges of the institution or by giving preference to higher grade averages or higher rank in class. This actually leaves but fourteen (21 per cent) of the 66 institutions using only the certificate method and allowing free and unhampered admission upon graduation from high school.

Achievement examinations were used as a basic entrance requirement by only three institutions. If primary admission requirements could not be met, admission was permitted by this method in an additional twenty-six (37 per cent) of the 71 institutions surveyed.

Three (4 per cent) of the 71 institutions used scholastic aptitude

tests as primary requirements for admission, but twenty-eight (39 per cent) permitted this as a means of admission for candidates not otherwise eligible. Many other schools administered or required scholastic aptitude tests for guidance purposes but did not use them as entrance criteria.

Results of tests of General Educational Development were not used by any of the institutions if other methods of admission could be met by candidates for entrance. They were, however, accepted as a means of admission for veterans and in some cases other mature individuals who had not graduated from high school but who were judged on the basis of these tests to be competent to pursue college work. Thirty-three (46 per cent) of the institutions permitted this method of admission.

Fifty-seven (80 per cent) of the 71 state institutions surveyed had a partially prescribed subject pattern for entrance. The amount of prescription varied from only one unit prescribed to only three units permitted as free electives. Table I summarizes the central tendencies of these unit requirements for the four types of academic colleges surveyed.

TABLE I
SUMMARY OF NUMBER OF UNITS REQUIRED IN THE VARIOUS
SUBJECT MATTER AREAS

Institution	Central Tendency	English	Mathematics	Science	Social St.	For. Lang.	Total
Colleges of Agriculture	Mean	2.6	1.6	0.7	0.7	0.2	5.8
	Median	3.0	2.0	1.0	1.0	0.0	7.0
	Mode	3.0	2.0	1.0	1.0	0.0	7.0
Colleges of Arts & Sciences	Mean	2.3	1.2	0.5	0.5	0.5	5.0
	Median	3.0	2.0	0.0	0.0	1.0	5.0
	Mode	3.0	2.0	0.0	0.0	2.0	0.0
Colleges of Education	Mean	2.0	0.9	0.3	0.5	0.4	4.1
	Median	3.0	1.0	0.0	0.0	0.0	4.0
	Mode	3.0	2.0	0.0	0.0	0.0	0.0
Colleges of Engineering	Mean	2.5	2.4	0.8	0.8	0.4	6.9
	Median	3.0	3.0	1.0	1.0	0.0	7.5
	Mode	3.0	3.0	1.0	1.0	0.0	7.0
Averages	Mean	2.3	1.6	0.6	0.6	0.4	5.5
	Median	3.0	2.0	0.0	0.0	0.0	6.0
	Mode	3.0	2.0	0.0	0.0	0.0	0.0

Rank in class was used as an admissions criterion in one form or another in forty-three (61 per cent) of the 71 institutions surveyed. In twelve (28 per cent) of these 43 institutions a certain rank in the graduating class was required for out-of-state students only; in six (14 per cent) attainment of a certain rank in class was given preferential treatment, such as exemption from subject requirements or from entrance examinations; in seventeen (40 per cent), rank in class was used for determining admission in cases where primary requirements could not be met; and in eight (18 per cent) attainment of a certain rank in class was a basic or primary requirement for admission. The rank in class required for admission varied considerably in the several institutions from the top one-tenth to the top two-thirds of the graduating class. A common practice among the state institutions surveyed was to require out-of-state students to rank in the top one-half of their graduating class, but not to require any particular attainment in this respect for state students.

Recommendation of the high school principal was seldom used as a lone criterion for admission, but it was often teamed with other criteria for a composite method of admission. The Michigan Secondary School-College Agreement featured the high school principal's recommendation as the sole requirement for students from schools that were signatories to the agreement, but it was not used to this extent by other state universities and land-grant colleges. Of the 71 institutions surveyed, only the two Michigan schools (3 per cent) accepted the principal's recommendation as a single criterion for admission. Thirteen (18 per cent), however, required such recommendation as a part of the primary admission requirements; and twenty-three (32 per cent) more used it as a part of their secondary admission requirements. Actually, then, the recommendation of the high school principal was a part of the admissions program of thirty-eight (53 per cent) of the 71 state universities and land-grant colleges surveyed. This is in very close agreement with the results obtained by Hinckley¹ in 1941.

None of the institutions surveyed admitted students on the basis of a personal interview alone, but ten (14 per cent) institutions did make some use of the personal interview. Some institutions used the personal interview only for special cases, some for out-of-state candi-

¹ William W. Hinckley, *Handbook of College Entrance Requirements*. Washington, D.C.: United States Office of Education, Bulletin No. 13, 1941, pp. 1-79.

dates, and one school required conferences for guidance purposes for all students ranking in the lower half of their graduating classes.

The usual requirement pattern of the institutions could be summarized as follows:

1. A diploma or certificate of graduation from an accredited high school was a basic requirement.

2. The high school diploma was most frequently teamed with various subject matter requirements, the pattern of requirements varying among the several colleges or schools of the same institution.

3. The typical basic requirements were, then, graduation from an accredited high school together with certain subject matter requirements. If these requirements could not be met, most state institutions permitted entrance through other means or combination of means. The following were the most common of these methods:

- a. Examinations were often permitted, such as achievement examinations in subject matter areas, scholastic aptitude tests, or General Educational Development tests for veterans and other mature individuals.
- b. Rank in class was often applied to limit non-resident students or to permit better students to waive subject matter requirements.
- c. The recommendation of the principal was seldom used as a sole criterion for admission, but it was often applied together with entrance examinations or rank in class, or both, to permit entrance for non-graduates of accredited schools.
- d. The personal interview was generally used in combination with other criteria as an additional aid for determining borderline cases, or it was used for guidance purposes only.

Colleges of Engineering generally had the most prescriptive requirements, Colleges of Education, the fewest, and Colleges of Arts and Sciences showed the greatest variation. Central tendencies indicated that approximately one-half of the high school curriculum was prescribed for prospective College of Engineering students.

After this documentary study of the current admission requirements of the various state universities and land-grant colleges and a review of the literature on admission requirements, 12 distinct admissions criteria were isolated and used in an opinion survey of the desirability and administrative feasibility of such plans and proposals. Copies of questionnaires were sent to the Registrars of the 71 state universities and land-grant colleges, to the deans of the Colleges of Agriculture,

Arts and Sciences, Education, and Engineering of these same institutions, and to the administrator of each of the 87 public high schools of the State of Wyoming. Registrars were asked to indicate their opinion of the administrative practicability of the 12 plans, Deans were asked to indicate their opinion of the desirability of the proposals, and high school administrators were asked to indicate their opinions in both areas.

In analyzing the returns, the chi-square test was used to determine the significance of the observed distribution of opinion and to determine the significance of any observed differences between possible pairs among the several groups of respondents.

An index of practicability and an index of importance was established for each item. The index of practicability was established by using the following values:

<i>Rating</i>	<i>Index of Practicability Value</i>
Very Easy to Administer	1
Moderately Easy to Administer	2
Very Difficult to Administer	3

The index of practicability was then established by multiplying the percentage of responses under each rating by the corresponding index value, adding the results, and dividing by 100. The index of importance was established by using the following values:

<i>Rating</i>	<i>Index of Importance Value</i>
Very Desirable	5
Desirable	4
No Opinion	3
Undesirable	2
Very Undesirable	1

The index of importance was then calculated by multiplying the percentage of responses under each rating by the corresponding index value, adding the results, and dividing by 100. This served as a contrast to the practicability index, as the two index values cannot be compared directly, since they are based on different scale values. Tables II and III show a summary of this information.

Analysis of opinions and comments of the co-operating groups of Registrars, Deans and high school administrators indicated an acceptance of the certificate of graduation from an accredited high school as the primary requirement for admission to state universities and land-grant colleges. A substantial majority, however, felt that such

TABLE II
ADMISSIONS CRITERIA—INDEX OF IMPORTANCE VALUES AFTER
CONVERTING OPINIONS OF DESIRABILITY INTO INDEX OF
IMPORTANCE SCALE

Item	1	2	3	4	5	6	
1. Certificate or diploma of graduation from an accredited high school	4.21 S	4.26 S	4.39 S	4.22 S	4.50 S	4.25 S	4.26
2. A required pattern of high-school college-preparatory subjects	3.76 S	3.67 S	3.94* S	3.88 S	2.86† S	4.06* S	3.88
3. Rank in class	3.21† S	4.01* S	3.76† S	4.32* S	3.94 S	4.00 S	4.10
4. Scholastic aptitude test	3.99 S	4.01 S	3.84 S	4.12 S	4.02 S	4.05 S	4.02
5. Achievement tests in high-school subjects or areas	3.64 S	3.81 S	3.68 S	3.99 S	3.71 S	3.90 S	3.81
6. Recommendation by the principal and/or faculty	3.82 S	3.84 S	3.70 S	3.84 S	4.02 S	3.86 S	3.84
7. Personal interview	3.28† S	3.65* S	3.56 S	3.59 S	3.64 S	3.68 S	3.64
8. General Educational Development tests or high school equivalency diploma	3.04 NS	3.29 S ^a	3.27 S ^a	3.37 S ^a	3.34 S ^a	3.24 S ^a	3.27
9. Douglass Proposal	3.58 S	3.55 S	3.16† NS	3.81 S	3.89* S	3.38† S ^a	3.55
10. Illinois Plan	3.65 S	3.77 S	3.73 S	3.97* S	3.94* S	3.51† S	3.77
11. Michigan Plan	3.38 S	3.59 S	3.50 S	3.75* S	4.10* S	3.06† NS	3.59
12. Eight-Year-Study Plan	3.47 S	3.38 S	3.27 NS	3.41* NS	3.79* S	2.98† NS	3.38

NOTE: Column 1 shows opinions of Wyoming high school administrators, column 2 opinions of college/university Deans, column 3 Deans of Colleges of Agriculture, column 4 Deans of Colleges of Arts and Sciences, column 5 Deans of Colleges of Education, and column 6 Deans of Colleges of Engineering. S indicates a significant trend of opinion. NS indicates a distribution of opinion that does not differ significantly from an equal or a normal distribution; * and † denote significant differences of opinion between groups thus designated; and ^a indicates distributions of opinion significant at the .05 level but not at the .01 level.

TABLE III
ADMISSIONS CRITERIA—INDEX OF PRACTICABILITY VALUES AFTER
CONVERTING OPINIONS OF ADMINISTRATIVE FEASIBILITY
INTO INDEX OF PRACTICABILITY SCALE

Item	Wyoming Administrators	Registrars
1. Certificate or diploma of graduation from an accredited high school	1.10 S	1.08 S
2. A required pattern of high-school college-preparatory subjects	1.51 S	1.47 S
3. Rank in class	1.32 S	1.31 S
4. Scholastic aptitude tests	1.55 S	1.53 S
5. Achievement tests in high-school subjects or areas	1.53* S	2.00† NS
6. Recommendation by the principal and/or faculty	1.81 NS	1.63 S
7. Personal interview	2.14 NS	2.39 S
8. General Educational Development tests or high school equivalency diploma	1.72 NS	1.44 S
9. Douglass Proposal	2.45* S	2.76† S
10. Illinois Plan	1.87 NS	2.13 NS
11. Michigan Plan	2.47† S	1.92* NS
12. Eight-Year-Study Plan	2.49 S	2.49 S

certificate should be accompanied by at least a partially required high school subject matter pattern. There was a definite trend of opinion that other means of admission should be available for students of promise who could not meet these primary criteria for admission. Favored secondary means in order of preference were scholastic aptitude tests, recommendation of the high school principal, achievement tests, rank in class, personal interview, and General Educational Development tests. The Illinois Plan, which is in essence a combination of several of these criteria, was uniformly well received by all

groups. A curious anomaly was found in comparing the opinions on the recommendation of the principal with the Michigan Plan, which is built around such a recommendation. With one exception the groups rated the recommendation of the principal substantially higher than the Michigan Plan. While it is true that the Michigan Plan specifies an adequate personal file on each student, such data are certainly inferred as a necessary part of the information a principal must have in order to recommend a student for college.

Many comments indicated a feeling on the part of all groups that no one criterion should be considered alone, but only as a part of a pattern of admission. A strong awareness of the function of the state university and land-grant college in serving the people of the state was evidenced, but opinions as to the way in which such interests could best be served were split two ways. One trend of thought indicated that such state-supported institutions should make higher education available to all qualified high school graduates of the state, and the other trend of thought indicated that opportunities should be limited to the best or better qualified candidates only. Opinions are therefore in close agreement with current practice, implying that future changes in admission requirements will be evolutionary rather than revolutionary in character, as practice keeps pace with changing opinion.

APPENDIX

Description of Newer Proposals:

HARL DOUGLASS PROPOSAL—*Competencies necessary for college success*

1. A relatively large and precise vocabulary;
2. Skill in the use of many books, periodicals, and the library in general;
3. Ability to express oneself fluently and precisely in oral and written language;
4. Study habits and skills, particularly those centering around problem solving, rapid reading, careful reading, and note-taking;
5. A high degree of computational ability in arithmetic and simple aspects of algebra; and
6. The development, preservation and expansion of strong and stable interests in the various fields of experience such as public affairs, science and technology, and creative arts.

ILLINOIS PLAN—*Five criteria for admission:*

1. Score on a scholastic aptitude test;

2. Score on a test of critical reading;
3. Score on a test of writing skill;
4. Score on a simple mathematical test; and
5. Evidence that the student has intellectual interest and some effective study habits as shown by his having taken at least two years of work in one field in high school in which his grades were better than average.

MICHIGAN PLAN—

1. The college agrees to disregard the pattern of subjects pursued in considering for admission the graduates of selected accredited schools, provided they are recommended by the school from among the more able students in the graduating class.
2. High schools agree to assume responsibility for building an adequate personal file about each student, and for developing a summary of these personnel data for submission to the college.
3. The agreement does not imply that students must be admitted to certain college courses or curricula for which they cannot give evidence of sufficient preparation.
4. Secondary schools are urged to make available such basic courses as provide a necessary preparation for entering technical, industrial, or professional curricula.

EIGHT-YEAR-STUDY PLAN—*High Schools provide college with the following types of data:*

1. Descriptions of students, indicating qualities of character, habits of work, personality, and social adjustment.
2. The results of the use of instruments of evaluation: (A) Such standardized tests as are applicable to the work of the school; (B) Other types of tests appropriate to the objectives of the school; (C) Scholastic aptitude tests that measure characteristics essential to college work and are independent of particular patterns of school preparation.
3. For colleges that require tests by an outside agency, records of achievement in examinations that do not pre-suppose a particular pattern of content.

NOTE: The foregoing article is based on research conducted in partial fulfillment of the requirements for the Doctor of Education degree at the University of Wyoming.

Practising Diplomats by the Thousand

NORMAN ADAMS

OUR Government will sponsor the exchange of over 8,000 persons between the United States and 70 other nations this year. It will also encourage and assist, in other than financial ways, some 570 private businesses, institutions, and foreign governments in the interchange of over 7,500 more persons, which will increase the number of countries involved in these programs to well over 80.

These people comprise part of the very successful post-war educational exchange arrangements which are sending thousands of people to other countries for foreign study, training, teaching, lecturing, on-the-spot research, and observing and consulting with other countries' experts.

The United States Government programs have shown a definite increase in the quality as well as in the volume of personnel involved, and a well-diversified field of study approach is kept constantly in mind. The State Department's competently organized International Information Administration, which administers most of the grants, is wisely considering each recipient as a "junior diplomat" and the selection of the exchange personnel is carefully studied. The I.I.A's annual pamphlet, "International Exchange Opportunities," expresses this point of view very clearly.

The exchange program is one of the vital elements in the U. S. Government's "Campaign of Truth." Not only is it an effective way of breaking down barriers of misunderstanding about the United States, but it also harvests for this country a rich crop of knowledge about the problems and values of other countries, essential if we are to live up to our present position of leadership among the nations of the free world.

"The benefits of the exchanges are not limited to the participating individual alone. They reach far beyond when these people take part in a variety of extracurricular activities—as they usually do. Then, upon returning to their home countries, they disseminate the information they have acquired to countless others. Consequently, one of the guiding principles in the selection of participants is that they possess those personal characteristics which will enable them to develop understand-

ing of the people in the country they visit and communicate an honest expression of this experience to their fellow citizens upon their return."

Congress in at least 11 instances has authorized various international educational plans. This explains the noticeable increase from 913 grants in 1946 to over 16,500 federal grants in 1952, in programs conducted by the Department of State, the Army, and the Mutual Security Agency.

This reciprocal type of educational exchange program had its inception in 1938 with a plan incorporating some of the nations in the Western Hemisphere. It was unimpressive in both size and flexibility and was never actually given much of a chance to function, as the War's approach terminated the fluidity of movement between countries. With the War successfully concluded, the United States found that it had enormous real estate holdings in foreign areas. But when we sold our surplus material to the foreign countries we realized that they couldn't pay for them in dollars, as their negative trade balances with us had exhausted most of their dollar holdings. Their currency was of negligible value to us as we had no trade payments that would utilize all those funds: and so a unique pecuniary problem arose.

But in 1946, Senator Fulbright (Democrat from Arkansas) who was a Rhodes Scholar in England in his student days, introduced the now famous "Fulbright Act" by which the State Department can use a limited amount of the blocked currencies, procured through the sale of our real estate abroad, to finance the International Educational Exchange of Persons Plan. The debtor nations transfer to our Fulbright Commissions, located in each of the participating countries, the money which they owe us. This will be used to pay the expenses of the Americans coming to that country. It usually includes travel, living costs, and an incidental expense allowance.

The foreign currency is also used to pay for the travel of foreign nationals to the United States. As the currency is "blocked," *i.e.* not convertible into U. S. dollars, the foreigner must obtain some dollar aid to pay for his expenses while here. If he is a visiting lecturer or graduate research student, etc., he can usually obtain a salary from the American university with which he affiliates. If a student, he generally will apply for any one of the tens of thousands of scholarships offered by individual trust funds, businesses, and colleges. Also, often-times both governments will financially assist a visiting expert

or consultant in order to allow him to travel abroad.

This Fulbright Act was amended by the passage of the Mutual Security Act of 1952. This provided for the use of foreign currencies "held or available for expenditure by the United States or any agency thereof" which might have been procured by any one of many ways—not just through the sale of our foreign assets. Obviously, this enhanced the program's financial stability and widened its scope enormously.

In 1948 only Burma, China, the Philippines, and New Zealand were included in this program, with fewer than 65 American professors, research scholars, teachers, and students being exchanged with 36 foreign professors and students. The Americans, coming from 28 different states, studied 23 various fields of interest. The following year saw the addition of 8 new countries and an increase from the 100 "Fulbrighters" in 1948 to over 1,800 American and foreign nationals in 1949. Representation came from 46 States plus the District of Columbia, Hawaii and Alaska. The State Department pursued its intelligent policy of a wide flexible academic field which saw over 45 different subjects being studied.

Since 1949 the program has enlarged unbelievably. About 1,200 Americans, from every state and each U. S. territory, were awarded grants in 1950 (from 12,593 applicants) to travel and study in 15 nations of their choice. Over 1,300 foreigners were recipients and were sent to 45 different states and studied at least 50 different academic topics.

Two years ago 3,452 people were involved in this mass Fulbright exchange movement. Today, an even greater number are utilizing the facilities of the 27 nations now currently participating in the International Fulbright Program. The Act is not only a marvelous opportunity for interested scholars, but more: it is a means of seeing and understanding each other. It allows governments to send their specialists to help others, their leaders in industry and agriculture to learn newer methods, and students to study their subjects at first hand. It has logically and potentially far-reaching possibilities which should prove most conducive to international progress and a stronger union between the nations of the free World.

For example . . . James Coleman, from Utah, is interested in colonial development, and is studying in Nigeria. Walter Deshler is in Uganda living with the Mbulu people of the Northern Province

of Tanganyika, also studying colonial development. Bryn Mawr graduate Reba Benedict has always been interested in geology and is now in Scotland pursuing her topic, "A General Study of the Geological structure of Scottish Highlands and Lowlands." Indiana-born Kurt Kaufman, a student bacteriologist, is enrolled at Oxford University in England, following in the footsteps of Dr. Fleming, the discoverer of penicillin.

"The taxonomy of orchids and ferns" is the botanical specialty of Gordon De Wolf from Arizona (where there certainly aren't many orchids or ferns!) so he is at the University of Malaya in Singapore. Lois McDonnell is enrolled in Manchester University in England in one of the very few schools stressing "education for pre-school and hard-of-hearing children."

Besides this gigantic Fulbright Program, our government is also actively engaged in the following:

- 1) The Buenos Aires Convention, which provides for the annual exchange of graduate students between the United States and 16 South American countries.
- 2) The program established by the Smith-Mundt Act, which puts the educational exchange program into our national policy and assists financially the interchange of persons between America and the entire Western Hemisphere, the Fulbright countries, and more than 20 other nations in the Eastern areas of the World.
- 3) The Maritime Commission Program, which authorizes a 4 year instruction course for 12 citizens of other American Republics at the U. S. Merchant Marine Academy.
- 4) The Finnish Agreement, which puts aside part of the annual payment on Finland's World War I debt to the United States to be used for educational exchange between the two countries.
- 5) The program of the Foreign Economic Assistance Act, which allows Chinese and Korean scholars, stranded in America, to continue their studies here.
- 6) The Iranian Trust, received by the State Department, which is used for the education of Iranian students in the United States.
- 7) The program set up by the Annual Appropriations Act, which expends money through the Department of State to bring students, educators and businessmen from Austria and Germany to the United States.

The thousands of American exchange students study art in Paris and Rome; music in Milan and Vienna; city planning in Venezuela

and Australia; agriculture in The Netherlands and Pakistan; anthropology in Greece and Peru; economic nationalization in Great Britain and Argentina; mining in the Union of South Africa and Chile; classical literature in Athens or in the shadows of the Vatican; history in Turkey or Western Germany; and business techniques in Belgium and Austria.

The foreign students coming to our Universities study mostly agriculture, chemistry, engineering, medicine, physics, economics, public administration, and secondary education. The foreign instructors are spread evenly throughout 46 of our States; while we send most of our educators to the United Kingdom, Burma, The Philippines, Thailand (Siam), Greece, New Zealand and Pakistan.

Our Point 4 Program and Foreign Operations Administration, combined with numerous civic-spirited private businesses and organizations, have been pushing an ambitious exchange plan with special emphasis on bringing foreign executives and government officials to the United States. Foreign journalists may come here and work for 4 months on a newspaper staff. Labor leaders will be guided through American unions and industries. Foreign government officers, educators, scientists, and others will study, observe, and comment on the political, economic, and cultural aspects of their impressions with American colleagues in their respective fields. A member of parliament from Southeast Asia remarked, when returning to his homeland, 'I wanted to learn about American life because it was only possible in the United States for me to see the difference between democracy and communism. I have definitely accomplished this!'

In 1951 over 200 grants to Americans taking part in specialized assignments were given for their assistance in 25 countries. Typical of these was the appointment of a dentist to Thailand, a labor specialist to Trieste, a monetary economist to Israel, and a radio electrician to Greece. The impact of these awards has already been felt. For example, the dentist, who is the dean of an American medical school, assisted in the organization of a Thailand School of Dentistry; through professional contacts he was able to stock it with new medical textbooks; and upon his return to America he arranged for private scholarships for Thai students for their graduate study in American dental schools. These exchanges often have a dynamic effect on a wide and varied group of people. A Howard University scholar, doing graduate research on French political problems, spoke to a

large audience on the progress made by the American Negro in attaining first-class citizenship. Included in the group listening to him were colonial governors, members of parliament, and leaders in important organizations interested in federation of the French union. This is certainly another example of our American exchange students' acceptance of their role to present our country honestly and objectively to the entire world.

In addition to these types of awards, the State Department also has continued to provide in-service training for foreign nationals interested in political science. For example, Australia and the United States concluded an agreement (Smith-Mundt Act provisions) which allowed the U. S. Bureau of Reclamation to train 12 Australian engineers a year for the next several years in the Bureau's installations at Denver. The Bureau has agreed to design some of the works to be undertaken by the Australian Snowy Mountain Hydroelectric Authority. Every service and facility, including tuition for the Australian trainees, will be paid for by the Snowy Mountain Authority.

But certainly all of these educational sponsorships are not done solely by our government. The development of the American Exchange Program is due in large measure to the enthusiasm of private organizations and foundations. For instance, in 1951-52, of the 31,000 foreign students here, over two-thirds were receiving monetary assistance from private sources. The approaching years will show an even greater private impetus given this movement when the Ford and Cordell Hull Foundations begin their exchange plans. Typical examples of these private exchange actions were: 1) The American Chemical Society enabled over 250 young European and Southeast Asian chemists and chemical engineers to attend the International Chemical Conclave in New York, and to observe and study at first-hand the scientific, industrial and educational advances which have been made in this country; 2) The Trans-World Airlines sponsored newspapermen from 14 nations for a two-week tour of the United States; and, 3) private donors granted outstanding young American musicians financial travel awards to the annual musical competition in Brussels (during last year's competition, at which no prominent American artist appeared, the highest awards were given to Soviet pianists).

The United Nations' annual report, "Study Abroad," delineates many of the government and private scholarships available to peoples

from almost every country. It shows that fewer than 15,000 grants were available in 1948, while today more than 40,000 are awarded. This great evolutionary movement is attempting—and successfully so—to unite the free world by mutual understanding and appreciation of one another's customs, beliefs and habits.

We, as Americans, can be justly proud that our government is undertaking this program in an enthusiastic and competent manner. It is a wise investment for future peace and progress.

Factor Analysis of High School Scholastic Experience and Success in the First Semester at the University of California at Davis

ELIZABETH C. BAKER, GEORGE A. BAKER, EDWARD B. ROESSLER,
AND HOWARD B. SHONTZ

INTRODUCTION AND SUMMARY

THERE exists an extensive literature concerning the problem of predicting success in an institution of higher learning on the basis of pre-entrance experience. Cosand (4) lists 185 references. A departmental office has been established at the University of Washington to study the relationships between pre-university experience and success in the university (1), (2). The University of California has conducted numerous studies concerning admissions and has revised its entrance requirements during the course of the years. The extent of these studies has been partially indicated by Spindt (6) and (7).

An examination of the literature led us to think that the problem was still in an unsatisfactory state and that we could make some clarification of the matter. It also seemed possible that the University of California at Davis might have special aspects that needed study.

The subjects required for admission to the University of California, known as the a-f requirements, are:

- a. U. S. History—1 unit
- b. English—3 units
- c. Mathematics—2 units in algebra, geometry, or trigonometry
- d. Laboratory science—1 unit
- e. Foreign language—2 units in same language
- f. Additional advanced course—1 (or 2) units in mathematics, foreign language, chemistry or physics

The main statistical device found useful in the present investigation is factor analysis as initiated by Professor Harold Hotelling and developed and presented by Cattell (3), Holzinger and Harman (5), and Thurstone (8).

Factor analysis applied to the present problem showed that the variables considered could be replaced by two factors. Expressed in terms of these two factors the variables broke up into three distinct groups. One group consisted of variables expressing achievement within the high school and included grade point averages, the number of grade points in high school subjects and combinations of subjects, the result of the subject A examination, and so on. The second group consisted of the single variable, University of California grade point average differential. This variable measures the relative standing of the high schools with respect to success in the University and seems to be independent of the high school variables. These facts indicate that attempts to measure probability of success in the University in terms of ratings within the high school only are almost sure to fail and show, further, that the high schools have an inescapable responsibility for the success of their students, at least for the first semester in the University.

The third cluster of variables measures the success of the students in the first semester of the University and is situated almost midway between the groups mentioned above. That is, standing within the high school and differences between the high schools are both very important in determining success in the first semester in the University. Success within the high school seems to be about twice as important as coming from a relatively successful high school.

There is one additional feature of these data that is very striking. When we try to construct equations that will predict success in the University from the part of the structure that we have at our disposal at the time of admission we are not too successful. The correlation between observed and predicted scores is about 0.68. An examination of the data shows that many success scores are predicted quite accurately but sometimes a student who has done well in high school does very poorly in the University and, on the other hand, sometimes a student who has done inferior work in high school does extremely well in the University. These marked discrepancies between prediction and performance are due to something that is not being measured by the high school variables or the University of California differential. They may be explained in terms of emotional reactions, motivations, rates of intellectual and physical growth, and other similar variables. Something is needed in addition to the routine information available to an admission officer under the present conditions.

At present, as good results as any are secured by considering two or three high school variables in addition to the U.C. differential in assessing the probable success of the student in the University. The best high school variable, according to this study, is the grade point average on the subjects used to satisfy the a-f requirements. This fact lends considerable support to Spindt's defense of a subject pattern (7).

DATA

The data consist of information on 178 students who entered the University of California at Davis directly from California high schools in the fall of 1953. It is realized that this is a somewhat heterogeneous group in that the students graduated from high schools of different sizes which they had attended for varying lengths of time; that the U.C. differential was determined on widely varying numbers of students; and that other irregularities exist. Thus, the factor analysis was carried through for the 178 students; repeated in complete detail for 106 students from large California high schools (over 500 students); and repeated again for 65 students who had attended for at least two years just prior to graduation large California high schools for which the U.C. differential was based on at least twenty students. The picture remained essentially the same for each of the groups considered, so that the detailed analysis is presented only for the largest (178) group. It should be noted that certain details of the picture for the more nearly homogeneous groups were more clear-cut.

A total of 61 variables was considered at the beginning of this study. Many scatter diagrams were made and the variables seem to be linearly related. Some distributions are slightly positively skewed. Variables which are not correlated with variables measuring success in the University or which are not known to the admissions officer at the time a decision as to admittance or deferment must be made are omitted. Further, some variables that refer to break-downs into subject fields are omitted at this time because they will be dealt with in a future study.

After preliminary screening the variables listed in table 1 were retained.

The complete description of the 15 retained variables is as follows:

1. v_5 —The University of California differential computed for each high school on the basis of all students regularly admitted

from that school for the past five years as the difference between the average made by these students their first semester in the University and the entering average based on the subjects used to satisfy the a-f requirements taken in the last three years of high school.

2. ${}_1V_{10}$ —Grade points on the best units available to fulfill the a-f requirements. Only work taken in the last three years is considered in computing the total grade points and the grade point averages (${}_3V_{10}$).
3. ${}_3V_{10}$ —Grade point average on a-f requirements.
4. ${}_1V_{12}$ —Grade points on acceptable English.
5. ${}_3V_{12}$ —Grade point average on acceptable English.
6. ${}_1V_{13}$ —Grade points on acceptable mathematics.
7. ${}_3V_{13}$ —Grade point average on acceptable mathematics.
8. ${}_1V_{17}$ —Grade points on third and fourth year English, mathematics, laboratory science, foreign language, and history or social science including United States history.
9. ${}_3V_{17}$ —Grade point average on the units listed for variable ${}_1V_{17}$.
10. ${}_1V_{18}$ —Total grade points on all high school units accepted for credit.
11. ${}_3V_{18}$ —Grade point average on all high school units accepted for credit.
12. ${}_1V_{22}$ —Total grade points earned in the first semester in the University not including subject A (non-credit English).
13. ${}_3V_{22}$ —Grade point average for the first semester in the University not including subject A.
14. ${}_1V_{23}$ —Total grade points earned the first semester in the University including subject A as three units.
15. ${}_3V_{23}$ —Grade point average for the first semester in the University including subject A as three units.

ANALYSIS OF THE DATA

After the preliminary screening of variables all possible correlation coefficients as detailed in table 1 were computed. Four variables measuring success in the University were kept because it was not known which would conform best to the other variables. All four of these variables were found to be about the same except ${}_1V_{23}$ (grade points the first semester in the University including subject A at three units) which was a little poorer than the others, possibly because the subject A grades seem to be assigned on a somewhat different basis than the other grades in the University.

The 15×15 correlation matrix of table 1 was reduced to a 2×15

factor matrix as indicated in the first part of table 2 by the methods explained by Cattell (3). This matrix was rotated in such a way as to make the loadings on the variables measuring success in the University practically one as given in the last part of table 2. The communalities from table 2 are recorded in the diagonal of table 1.

Since in table 2 the variables measuring success in the University are nearly one on the F_1' -axis and the lines joining the origin to the other two clusters of variables are nearly perpendicular, it could be

TABLE 1
CORRELATION COEFFICIENTS FOR 15 SELECTED VARIABLES FOR HIGH SCHOOL AND FIRST SEMESTER UNIVERSITY WORK AND ESTIMATED COMMUNALITIES (DIAGONAL TERMS) FOR 178 STUDENTS ADMITTED FALL SEMESTER, 1953 AT THE UNIVERSITY OF CALIFORNIA AT DAVIS DIRECTLY FROM CALIFORNIA HIGH SCHOOLS

Variable	-v ₈	1V10	3V10	1V12	3V12	1V13	3V13	1V17	3V17	1V18	3V18	1V22	3V22	1V23	3V23
1. -v ₈	(.436)														
2. 1V10	-.074	(.808)													
3. 3V10	-.003	.802	(.946)												
4. 1V12	-.039	.478	.608	(.678)											
5. 3V12	-.044	.530	.727	.843	(.794)										
6. 1V13	-.043	.401	.461	.112	.163	(.523)									
7. 3V13	-.071	.567	.702	.318	.404	.737	(.742)								
8. 1V17	-.008	.758	.618	.438	.328	.496	.415	(.647)							
9. 3V17	-.093	.642	.846	.578	.662	.311	.622	.533	(.880)						
10. 1V18	-.122	.530	.688	.581	.605	.323	.564	.376	.704	(.809)					
11. 3V18	-.110	.696	.846	.638	.888	.377	.680	.419	.941	.893	(.949)				
12. 1V22	.281	.329	.572	.343	.429	.382	.453	.355	.517	.354	.506	(.986)			
13. 3V22	.291	.351	.582	.353	.419	.360	.430	.369	.521	.346	.546	.951	(.987)		
14. 1V23	.289	.287	.531	.303	.381	.388	.488	.329	.491	.318	.460	.971	.937	(.978)	
15. 3V23	.278	.277	.585	.379	.441	.366	.444	.373	.536	.319	.577	.948	.970	.946	(.986)

hoped that F_1' , or success-in-the-university, could be estimated from the U.C. differential, and some or all of the high school variables. Such an estimating equation was found as explained by Holzinger and Harman (5), Appendix G, pp. 389-392, using six high school variables and the U.C. differential. The resulting equation is

$$.340 T_5 - .181 {}_1T_{10} + .489 {}_3T_{10} + .108 {}_3T_{12} - .206 {}_1T_{13} + .390 {}_3T_{13} = {}_3T_{22} \quad (1)$$

where the T 's are the standard scores of the corresponding v 's. In obtaining this equation a complete refactorization using these six variables and ${}_{1V22}$ and ${}_{3V22}$ was made. Since the factor loadings were changed very little from table 2 they are not given in detail.

If the individual values of the left side of (1) are computed it is found that the variance of these estimates is about half what it should be and that the correlation between the left side of (1) and the observed values of ${}_{3V23}$ is $r = 0.67$.

DISCUSSION

An inspection of table 1 shows little or no correlation between U.C. differential, v_5 , and the high school variables, but a correlation of about 0.3 between v_5 and the success-in-the-university variables ($1v_{22}$, $3v_{22}$, $1v_{23}$, and $3v_{23}$). The correlations between high school variables and university variables are moderate with the highest values being reached for $3v_{10}$, grade point average on units used to satisfy the a-f requirements. The university variables are highly correlated.

The structure of the variables of table 1 is surprisingly simple. The factorizations of table 1 and similar tables for progressively more nearly homogeneous populations indicate clearly that the structure depends only on two factors. One of these factors can be called first-semester-academic-success factor and the success-in-the-university variables are almost pure measures of this factor. The second factor seems to be concerned solely with the high school situation.

Table 2 indicates three distinct clusters of variables. One cluster is made up of variables within the high school; the second cluster comprises the U.C. differential; and the third is composed of the university-success variables which appear to be the resultant of the variables in the other two clusters.

TABLE 2*
FACTOR LOADINGS ON TWO FACTORS FOR THE 15 VARIABLES OF
TABLE 1 ROTATED TO MAKE THE LOADING OF
 F_1' ON $3v_{22}$ A MAXIMUM

		V_0			λ_1			V_1	
		F_1	F_2		F_1'	F_2'	F_1'	F_2'	h^2
1	$-v_5$	.088	-.427	F_1	.815	.580	.319	-.297	.190
2	$1v_{10}$	.698	.406	F_2	-.580	.815	.333	.736	.653
3	$3v_{10}$	.910	.258				.592	.738	.895
4	$1v_{12}$	.617	.281				.340	.587	.460
5	$3v_{12}$	.739	.289				.435	.664	.630
6	$1v_{13}$	.522	.040				.402	.335	.274
7	$3v_{13}$	.712	.210				.458	.584	.551
8	$1v_{17}$	.614	.202				.383	.521	.418
9	$3v_{17}$	.840	.264				.531	.702	.775
10	$1v_{18}$	.711	.385				.356	.726	.654
11	$3v_{18}$	.885	.343				.522	.793	.901
12	$1v_{22}$	.799	-.577				.986	-.007	.972
13	$3v_{22}$	.803	-.573				.987	-.001	.974
14	$1v_{23}$	.773	-.598				.977	-.039	.956
15	$3v_{23}$	.804	-.570				.986	.002	.972

* For the form of this table see Cattell (3) p. 195.

TABLE 3
MEANS AND STANDARD DEVIATIONS OF THE FIFTEEN
VARIABLES OF TABLE 1

No.	Variable	Mean	Standard deviation
1	$-v_5$	1.050	0.2537
2	$1v_{10}$	16.896	3.1568
3	$3v_{10}$	2.308	0.3658
4	$1v_{12}$	8.467	2.1040
5	$3v_{12}$	2.286	0.4591
6	$1v_{13}$	6.042	2.5846
7	$3v_{13}$	2.065	0.5922
8	$1v_{17}$	15.652	3.8566
9	$3v_{17}$	2.259	0.3758
10	$1v_{18}$	43.708	8.5917
11	$3v_{18}$	2.263	0.3622
12	$1v_{22}$	18.705	9.8974
13	$3v_{22}$	1.292	0.6174
14	$1C_{23}$	20.469	9.7735
15	$3v_{23}$	1.301	0.5943

When we try to estimate the success-in-the-university variables in terms of the other two components of the structure, we are not too successful. The correlation between estimated and observed standard scores is about 0.68. Many estimates are very good after correction for a smaller variance but there are substantial numbers of students who did poorly in high school who do relatively much better in the University. On the other hand, there are students who did very well in high school who fail miserably in the University. Our examination of the present students on the basis of information available in a routine manner to the officer of admissions does not reveal any rule that will distinguish such persons.

If we look at equation (1) we see that the weight attached to the U.C. differential is about half of the combined weights attached to the high school variables. Further, two weights for the high school variables measuring the amount of work undertaken are negative.

If fewer variables are used in an equation similar to (1) practically as good results would be obtained. Thus, for a "regular" student perhaps as good an estimate of his probable success could be made from the two variables v_5 , U.C. differential, and $3v_{10}$, grade point average on the units used for the a-f requirements. The values used should be approximately standard scores and they should bear weights in the ratio: 1:2 for v_5 and $3v_{10}$ and with a proper factor to give a standard score. This is a suggested working rule but it should be borne in mind

that there will be exceptional cases that do much better or much more poorly than expected because of emotional and growth factors on which no information is available. For reference and help in estimating standard scores the means and standard deviations of the variables of table 1 are given in table 3.

It should be kept in mind that all the preceding remarks apply to the present admissions procedure. The a-f requirements have been used for some years. If these requirements were drastically changed for a number of years the "best" high school variable might be different. Continuing studies are needed to determine the "best" admission policies under changing conditions.

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Editorial Comment

For Curiosity's Sake

IN LOOKING at the roll books we noted that following the war between the states when admission was first granted women the first two enrolled were a Mary and a Margaret. In the years that followed the name Mary appeared more and more frequently. Indeed by the turn of the century it held a triple margin over its nearest competitors, Anna, Blanche, Lena, and Mabel. At the quarter century mark it was ahead of its nearest rival, Helen, by a third, and ahead of Ruth and Margaret, the next in line, by a half. At this date names were still the kind that one could spell from hearing them spoken, but something new had entered the picture—combinations, a development that, along with unusual spellings of singular names, is all too well known to us. But, although Mary retains a firm lead in today's rolls, there is an indication that it may not a quarter century hence. For a check of alumni birth announcements and elementary school rosters indicates that Mary is losing ground to Karen, Linda, Sharon, and Sue. Are we developing a roster of "American" names, or are we succumbing to the advertising rhymster? Whatever is happening, a change from something that has held firm for a century merits notice, even if for no other reason than to keep alive our curiosity about things outside of our realm of figures and courses.

R. E. M.

No Room for Cynicism

The now century and a quarter year old classical language ledger shows signs of having rested in a crevice of the damp sandstone basement wall of "Center College." The professor when preparing for retirement in 1859 recorded that "this book was abstracted from the Professor's desk during the examination of 1858 in June and found in its present dilapidated state sometime during the Autumn of 1858." On the opposite page he recorded this: "I bear a cheerful testimony to the gentlemanly bearing of all students toward me in all relations."

A half century later a successor to this professor was to record that "there are verities of life that college pranks can't destroy." He prob-

ably chuckled as he looked back at an earlier entry. "Yesterday morning the President commended the students for their good behavior in allowing the new mown grass to lie untouched on the ground. So when we went to college yesterday the grass was piled up in recitation rooms and chapel." The University's publicity brochure of this latter period has in it this statement under the caption "Is the Young Man Safe?" "One can go wrong, but must do it against the tide."

What has changed? Professors no longer use the records to record personal observations and impressions. Pranks have changed (the lawnmower has replaced the scythe), and we use less direct language to reassure parents about the students' welfare. But the students are essentially the same. Only rarely are there those whose actions are vicious or whose bearing is ungentlemanly. They are essentially good and interested in self-improvement.

Could one work in an environment with more opportunity for service and for satisfaction? In this work there is room for the critic, but not for the cynic. Those who persist in speaking and writing cynical statements about college students and colleges we believe are incapable of finding satisfaction anywhere.

R. E. M.

Improve Your Reporting Skill

Have the reports you submit to your president and other officers resulted in gaining for you responsible assignments? Have they resulted in enough interest that they have become established monthly or annual reports? Have they resulted in enough interest that graduate students have been urged to explore specific topics further? Have they resulted in your being asked to advise with groups dealing with important problems?

If no tangible benefits have resulted from your efforts, it is time you examine your methods of reporting to make certain they are the kind that will get your reports into the recipient's "read" or "refer to" baskets. Ask yourself these questions. If the answer to any of them is "No" you aren't giving yourself a fair chance.

Have you prepared each report with the thought in mind that, whether requested or not, the primary purpose of a report is to enable someone to make a correct decision? Is your brief introductory paragraph the report in miniature—essentially a copy of the report you would have presented orally in conference with the person or persons to whom you are submitting it?

With this conference situation in mind, do you raise questions that relate to factors that you consider important and answer each question that you raise? Do you give meaning to your statements by making significant comparisons? Do you use charts accompanied by brief paragraphs of explanation instead of many pages of tables? Do you use plain English, omitting all narrow professional and technical terminology? ("Explain this in language I can understand," coming from one's president, may be a shock to one's pride in his reporting ability, but a great help in preparing better reports.) Do you make of the several sections of your report a coherent whole, using your introduction for the purpose we have outlined, using a discussion section for developing the report through presentation of facts pertinent to the topic, and a terminal section to sum up the discussion effectively?

Give yourself a fair chance by forcing yourself into the position of being able to say "Yes" to these questions. With this as a basis, practice will soon give you skill in preparing effective reports.

R. E. M.

Book Reviews

Yearbook of the Estonian Learned Society in America, I, New York: Estonian House, 1954. Pp. 64.

For more than three centuries the University of Tartu, in Estonia, founded by Gustav Adolf, maintained its integrity, developing after 1919, under the Republic, into an institution of which the Republic might be proud. But by 1944 about half of the faculty had fled the Russians, and of the half that did not flee, the great majority have been killed or have vanished. The small group of scholars who managed to get to this country have continued their work, the first publication of which by the Estonian Learned Society is this volume.

The Preface, a brief historical account of Estonian scholarship, is interesting as well as informative, in that it shows a determination and persistence that scholars have not always shown, on the part of the Estonians. The refusal either to kow-tow or to give up in the face of tyranny over the mind of man is a bright example for all scholars.

Of the articles included in the small volume, perhaps the most interesting to American readers would be those on The Cultural Autonomy of National Minorities in Estonia, by Karl Aun, and The Value of Agreements with the USSR, by Woldemar Eiso (the value is easily shown to be nil).

The Estonian Society has done more than simply publish another small book of papers, however: it has set up a monument. A small monument, perhaps, but one that should not perish until there are no free men left. The writers and editors have done a good job; but, unusually enough in academic research and publication, the determination to do outweighs the accomplishment, however commendable that accomplishment may be. The Estonians are good medicine for those who spend time wondering what may happen to them. It happened to the Estonians, and they continue their work.

S. A. N.

A Report for 1952-1954, New York: The Fund for the Advancement of Education, 1954. Pp. 126.

Facing the rising tide of enrollments in our schools and colleges, The Fund for the Advancement of Education has given assistance during the last two years to the collection of information on important educational problems, educational experimentation and demonstration, and evaluation of such demonstrations or experiments and dissemination of the findings. The assistance has been given to projects on the improvement of teaching, improvements in curricula, clarification of the functions of educational

institutions, equalization of educational opportunity, and improvement of educational management and financing.

Since all these projects are such as to interest any one interested in education today, the Report, which is succinct and meaty, should be widely read and pondered. Perhaps of especial interest are the experiments being carried on in various places and in various ways, in the improvement of teaching. The results of the experiments may well point the way toward alleviation of the dangerous shortage of teachers we face and apparently will face for some time to come. The discussion merits close attention.

The report includes tables, lists of committee members, and financial reports.

S. A. N.

Ferré, Nels F. S., *Christian Faith and Higher Education*, New York: Harper & Brothers, 1954. Pp. 251.

Persons who are up to date in their reading of books concerning Education and Religion will have heard of Dr. Ferré before now. Since 1950, he has been Professor of Philosophic Theology at Vanderbilt University. In recent years he has contributed many volumes relative to Christian faith and contemporary concerns and problems. The present book was written in response to the desire of the National Council of Churches for a study of the relationship of Christian Faith to higher education. Dr. Ferré has acquitted himself well, both in fulfilling the task assigned to him and in setting forth many first rate definitions of Education and of the implications of the Christian Faith for our times.

He sets out to propose in his own words "a relation between Education and Religion in terms of the Christian Faith that protects the integrity of both, while also joining them organically for mutual discipline and service." It is good to have pointed out once again the fact that both Religion and Education are in many ways similar, if not identical. Education, says Dr. Ferré, "is the discovery and implementation of significant truth. Education is not merely the transmission of our heritage, but it is transmission with creative and critical care; it is the discriminating transmission of culture." Part of the role of Religion is also indeed just that—the discriminating transmission of all that man has learned about God and man and the stimulation of mankind to discover new truths about this relationship.

The development of personality, both in its individual and social sense, is likewise a task of religion and of all education worthy of the name. Dr. Ferré reminds us that while religion is man's response to those things he considers of greatest reality and value, it is not to be necessarily equated with that which is good or true. Religion can be, and perhaps is, in many of its forms today detrimental to the growth of man's personality.

Religion may represent a retrogression to primitive superstition; it may encourage fear and a retreat into the unreal. One of the author's claims for the Christian Religion, as worthy of being taught and lived in our schools of higher education, is that it is good religion: it represents unswerving devotion to truth and gives man the power for, and points the way toward, greater understanding and appreciation of truth, whether revealed in what is called a spiritual way or through science, mathematics, or other of the disciplines of education. The Christian Faith as giving universal meaning to experience and as embodied in what Dr. Ferré calls "the community of concern" for one another, also as giving "reliable light," enables that faith to qualify further as good religion.

The author's contention that "no other interpretation of the ultimate can give so much meaning to existence and such power for life" will be disputed by some who are not of the Christian tradition. Dr. Ferré goes on to state, however, that the Christian community is totally inclusive, a society which ideally exists for service and development of man's physical and spiritual nature. Underlying his sometimes dogmatic statements is this broad and inclusive interpretation of the Christian Faith. This presentation, stated in inclusive, rather than the traditionally exclusive, terms, is refreshing and provocative. The author is well aware of the adverse criticism his thesis is likely to arouse. It is therefore good to hear him state, "The true Christian absolute . . . rejects dogmatism; it is an absolute that frees thought; (it can never be confined to historic formulation). Even its personal appearance in history comes in finite form—in 'the weaknesses of the flesh.' The will of God is sovereign beyond all its human expressions; it is never possessed by any institution, and never absolutely expressed by any book or creed." Equally refreshing is the reaffirmation of the truth that the Christian Faith is concerned with this world, its problems and opportunities, as well as with the larger future world of mind or spirit.

There are perhaps two adverse criticisms of Dr. Ferré's book. One has already been suggested, that is, that there are many who would question his statement and evidence that the Christian Faith does represent the highest truth. The other criticism is the more easily sustained. It is that he goes to too great length to lay specific plans for the creation of a Christian community of education in an ideal university or school. There are too many indications of a planned and perhaps regimented community life—perhaps too much Utopian optimism. This section of his book is rather on the wordy side. Dr. Ferré tries to solve too many problems. The whole of "Christian Faith and Higher Education," however, is well worth reading and pondering.

REV. ROBERT C. HUNSICKER, *Vicar*
St. Paul's Chapel, New York City

Wolfe, Dael, *America's Resources of Specialized Talent* (The Report of the Commission on Human Resources and Advanced Training). New York: Harper & Brothers, 1954. Pp. xviii + 332.

During World War II, the American Council of Learned Societies, the American Council on Education, the National Resources Council and the Social Service Research Council were called upon by the armed forces, government, and industry to help locate and develop specialized talent. Out of their experiences came the conviction that too little systematic study had been directed toward such problems. Through action of the Conference Board of these Associated Research Councils, therefore, and beginning with a \$20,000 grant in 1947, they established a Commission on Human Resources and Advanced Training which by 1952 had received \$240,000 from the Rockefeller Foundation for its work. This book by Dael Wolfe, Director of the Commission, is the report of the facts gathered in the studies of the Commission and the recommendations based upon those facts. Especially, the report urges the establishment of a public agency that will continue to collect information on specialized manpower and that will make such information available publicly for guidance in advising and encouraging young people to enter fields of work for which they are potentially best qualified and in which they are most needed. With the painful recollection of serious shortages of specialized talent during World War II, the prospective increase in need for such talent in our expanding economy and the disturbing news that the USSR is now graduating up to two and one-half times as many specialists as are graduating in the United States in fields such as engineering, such a recommendation would appear well founded.

In organization, the pattern of the book is workmanlike with a style both clear and concise. The text carefully defines the bases that have been used for classification and membership in specialized fields, then reports on college enrollments and on the distribution of degrees in these fields. It provides data on the occupational distribution of college graduates and discusses the supply and demand for personnel in the specialized fields of natural sciences, psychology, social sciences, humanities and arts, engineering, applied biology, health fields, business and commerce, school teaching, and other professions. The author emphasizes with wisdom that all projections are of trends only and subject to oversimplification, for fluctuations there will be, as well as individual exceptions to the general trends.

Beginning with Chapter VI, however, the author departs from the factual supply and demand concept used in earlier chapters. He now seeks supplementary long range answers in terms of potential supply in the form of questions such as, "How much important and useful knowledge about humanity which we might learn are we failing to learn?" instead

of, "How many additional social scientists and humanists could be employed?" The analysis of the potential supply of personnel through specialized abilities is recognized as being a theoretically attractive possibility. Yet the author concludes that present knowledge and techniques do not permit accumulation of data to assess the potential supply for each particular field of work because not enough is known about how the fields differ in the specific characteristics of ability, personality, and interest, and secondly because of the uncertainty of the students themselves concerning a professional or vocational choice. The problem is attacked in general terms, then, by asking, "Who goes to college," and we move on to consider in detail the differences in the characteristics of students who have entered the various specialized fields. One substantial consistency in the data reveals "that students in some fields were found to be more highly selected in terms of intelligence test scores than were students in other fields; moreover these differences were in most cases highly consistent from one educational level to another." This is true in spite of the great overlap in both the intelligence test scores and the socio-economic origins of members of the different fields. A chapter on the utilization of educated specialists leads into discussion of means to improve the utilization of the potential supply through financial aids, increasing motivation, and educational improvements.

Although interesting, the somewhat threadbare arguments of whether college programs should be articulated to three years instead of four years do not seem to be the kind of information one is looking for in this book, nor does speculation of how to use the savings that might accrue seem necessarily appropriate. If a few such already familiar roads have been followed in discussing the various opportunities present in a look ahead, they may be easily forgiven.

The book will have less value for institutions that have decided to hold to their current enrollment than it will for institutions that by law or by choice will expand in size under the pressure of the oncoming enrollment tide. For these schools the book will prove of particular value in aiding them to decide the direction and emphasis that can be given to their expansion. It deserves careful reading and study by all who are concerned with how our colleges and universities can best fulfill their primary obligations to the society they serve.

A. L. PUGSLEY
Dean of Academic Administration
Kansas State College

In the Journals

E. T.

Timely reading before our visit to Boston is "Role of Research in a Dynamic Economy" by James R. Killian, Jr., president of Massachusetts Institute of Technology. The article appears in the January 1955 issue of *Think*. President Killian stresses need for early recognition and training of those with scientific talent, for proper balance between basic and applied science, for a favorable climate for advancing research, and for more emphasis on the humane uses of science and technology.

Irene Davis, Registrar of Johns Hopkins University, is the author of an article on "Mechanized Registration" in Remington Rand's *Systems for Educators* for January-February 1955.

The value of education in the liberal arts "For an Era of the Unanticipated" is brought out in S. A. Nock's article in the *Bulletin of the American Association of University Professors*, Summer, 1954. Mr. Nock is Register of Pace College and a member of the COLLEGE AND UNIVERSITY Board of Editors.

"Troop Education in Korea" is described by Leonard T. Kreisman, a former Education Adviser in Korea, in the February 1955 issue of *Social Education*. The seven programs mentioned are basic education, intermediate education for non-commissioned officers, on-duty classes as background for military occupation specialties, off-duty classes to raise the general education level, the University of California extension program, individual USAFI courses, and testing. This type of program for all the armed services in all the areas was the subject of the Second Annual Armed Services Educational Conference sponsored by the University of Maryland and held in Baltimore, Maryland on January 12-13, 1955.

An opinion on college admission requirements is given by J. R. Shannon in the February 1955 issue of *The Clearing House* (a faculty journal for junior and senior high schools), "Let College Teach Their Own Prerequisites."

The reasons for resisting any pressures to increase the size of Denison University are given by its president, A. Blair Knapp, in "One College States Its Problem," *Higher Education*, January 1955.

The 1954 "Canadian Universities and Colleges" is a revision of the 1952 "Yearbook of Canadian Universities." In addition to material covered in the earlier edition, the booklet gives a brief explanatory outline of the French and English university systems in Canada and has a separate section on "Summer Schools." The booklet also gives information on special facilities for graduate study. It may be purchased from Dr. J. F. Leddy, Secretary-Treasurer, National Conference of Canadian Universities, University of Saskatchewan, Saskatoon, Saskatchewan.

The December 1954 issue of the National Education Association *Research Bulletin* is devoted to "Instructional Staff Practices and Policies in Degree-Granting Institutions, 1953-54." This comprehensive study gives data on composition of staffs according to rank and degrees, requirements for appointment and promotion, health services, sick leave, encouragement for further study, and retirement age.

The tools for teaching are evaluated in "The 3-D Classroom" by John Haverstick in the February 19, 1955 issue of *The Saturday Review*. After describing some new mechanical devices (including the tape recorder and TV), Mr. Haverstick enumerates advantages and disadvantages of the following tools: textbooks, tapes, records, television, radio, films, and film strips.

"Bell Telephone's Experiment in Education" is reviewed by E. Digby Baltzell, one of the instructors, in the March 1955 issue of *Harper's Magazine*. Because it was worried about over-specialization among its younger executives, the management of Bell Telephone Company brought to Philadelphia from various sections of the country seventeen of its employees who had reached the middle level of management. They were there for a ten-month program of lectures, discussions, seminars, and reading in the liberal arts. Mr. Baltzell discusses their experiences in the program and its results.

Reported to Us

M. M. C.

Dr. Edward G. Groesbeck has been appointed Director of the Office of Registration and Records of the University of Michigan. He was Assistant Registrar at Michigan since 1946. Dr. Groesbeck succeeds Dr. Ira M. Smith who was Registrar of the University for twenty-five years.

On March 1, 1955 Mr. John Little will become Dean of the Summer Session at the University of Colorado. Mr. Little has been Director of Admissions and Records at this institution for the past four and a half years following two years as Assistant Director. He will be succeeded by Mr. O. W. Hascall who has been the Assistant Director.

Mrs. Frances Hutchinson is now Assistant Director of Records and Registration following the resignation of Miss Katherine Malone at the University of Colorado. Mr. Lee Fusilier has been named Administrative Intern in the Office of Admissions and Records.

Mr. James H. Dean has been appointed Registrar of Berea College to succeed Miss Adelaide Gundlach who retires at the end of the school year after over thirty years of service in that position. Mr. Dean will come to Berea in March from the position of Administrative Assistant in the College of Science, Literature and Arts of the University of Minnesota, which he has held since 1949 while earning his Ph.D. degree.

Mr. Ira Holland has replaced Allen B. Kellogg as Registrar at Indiana Central College.

Miss Ann Woolery, a 1952 graduate of Bethany College in West Virginia, has joined the staff of the Wittenberg College (Springfield, Ohio) Registrars Office.

The Tulane University Senate recently approved the proposed "Newcomb-in-France" program for a year's study in Paris during a student's junior year, Dean John R. Hubbard of Newcomb College announced here.

Under a tentative time-table for the program next fall, Newcomb students would receive six weeks intensive language training at the University of Dijon before beginning their studies among the various faculties of the University of Paris.

"Newcomb-in-France" is intended for responsible students who are especially interested in the language, history and culture of France, or who desire to specialize in such subjects as art, government, history, international affairs, music, philosophy and political science.

The program will be self-sustaining and will not require any funds from the University for its maintenance, Dean Hubbard said. It will be supported entirely from tuition fees charged by the University of Paris and paid by our students themselves, he explained. It is hoped to establish similar study programs with the University of Madrid, the University of Munich, and the Università degli Studi in Florence, Italy.

Something new has been added to the Riverside campus of the University of California—students. For nearly half a century the home of the world-famous Citrus Experiment Station, the southern campus has rarely had more than one or two graduate students at a time.

But today, 126 undergraduates are hurrying along the newly-paved walks connecting five modern buildings . . . and hurry they must. For they are the charter student body of the first completely new four-year college in the history of the University of California (even the Berkeley campus was started with students and faculty from the private Contra Costa academy).

In addition to meeting the stiff requirements of a curriculum designed to educate as well as graduate, these busy pioneers have the responsibilities of selecting a school mascot, starting a student newspaper, organizing an Associated Student Body, writing school songs and—above all—establishing traditions.

Freshmen at Connecticut College for Women recently participated in an experimental test similar to the college board examinations taken before entrance to college. From the results of these tests, it will be determined whether or not the regular college boards can be changed.

College board tests are usually six hours long. These new tests are designed to cut down the time to about two hours. If the grades of the freshmen taking the new tests tally with the grades they had on the old ones, then the new tests will be substituted. Several other colleges are conducting this same experiment to find out if a shorter college board will be as useful as the six hour one.

Figures released by the Amherst College Director of Admissions, Eugene S. Wilson, reveal that approximately one out of every six who applied for admission to Amherst last fall was accepted for membership in the Class of 1958. The total number of completed applications rose to an

all-time high of 1,400, from which 253 were chosen. Thirty-one states and territories plus three foreign countries are represented in the freshman class.

The statistical report on the entering class seems to indicate several trends. The percentage of those admitted to Amherst from public high schools is increasing (35 per cent in 1945 to 56 per cent this year) compared to those who come from independent schools (39 per cent in 1945 to 38 per cent in the Class of 1958).

Likewise, those ranking scholastically in the first quarter of their secondary school graduating classes have increased from 45 per cent in 1945 to 76 per cent this year. Only four per cent of those in the recent entering class were ranked below the second quarter in schools where they completed requirements for admission to Amherst.

Highlighting a break-down of pre-college extra-curricular activities is the large number of freshmen (125) who were active as members of their respective student councils. The previous high was 98 (in this year's senior class) and the figure was only 32 just ten years ago, although the number admitted here each year has remained about the same during that period. In addition, the Class of 1958 contains the following: 27 valedictorians; 37 class presidents; 32 editors-in-chief of various publications; and 159 varsity athletic players.

Development of Portland State College will feed upper division students into Oregon State College at Corvallis and will enable OSC to increase specialization in upper division and graduate work as student enrollments grow, according to Dr. John R. Richards, vice chancellor of the state system of higher education.

Enrollment at Portland State will increase two and a half times by 1964 while other institutions in the state system will double their enrollments, Dr. Richards asserted. Portland State development will emphasize work in the freshman and sophomore years, he added, and its curriculums are limited to elementary and secondary teacher training and to a general liberal arts program leading to a degree in general studies.

"The state board will limit offerings in lower division to those that can be provided in Portland at low cost," Dr. Richards said. In its four-year studies, courses will be taught which can be handled with a high student-teacher ratio and no expensive equipment, he said. Savings effected by low-cost instruction at Portland State should be utilized in extending the system's high-cost program in Dr. Richards' opinion.

"Even though we find ways to do low cost instruction, this does not mean that we should cut our budget. Higher costs may represent higher efficiency. As we set up a Portland State College program, we should

continually point out that other programs may grow to meet their intended purposes. We must be prepared to defend higher cost, as higher staff-student ratio is needed in upper division work."

The Clemson College Board of Trustees recently wrote a new page in the history books in approving a plan to turn Clemson College co-educational. The plan will take effect at the beginning of the second semester of the current school year, beginning January 31.

This act follows up talk and plans of many years. In the past there have been numerous requests that the institution be opened to women. With the rapid industrialization of South Carolina and the entire south, requests have become more and more plentiful for women wishing to take technical courses which would enable them to tackle many jobs which have opened up for them.

Officials approved this admittance of women in the belief that it was the logical thing to do. It will benefit women in the area from which Clemson draws its students to take technical courses which they have previously had to go elsewhere to get. Clemson's turning co-educational leaves only one land grant college in the United States which admits only men.

Eventually courses will have to be added to all college curricula in order to satisfy women wishing to attend Clemson. The schools of arts and sciences and education are set up now only to accommodate a minimum of the students enrolled here. This is logical because of the fact that Clemson is primarily a technical school. In order to attract enough women students to put Clemson on the same basis with most co-educational institutions, courses will have to be added in these two schools.

New York University announces a new international language known as "Interlingua" will be taught for the first time in a college classroom when the 1955 spring semester begins at the Division of General Education, NYU's adult education unit. Interlingua, an auxiliary tongue with regular, simplified grammar and root words from many national languages, is designed to overcome language barriers faced by scientists and persons in foreign trade and travel. It is said to impress speakers of many Western languages as a modification of their native idiom.

Originating in late 1951 through the efforts of the International Auxiliary Language Association, Interlingua has progressed to a point where there are now more than 10 scientific journals that publish abstracts in the new tongue. Among them are *The Journal of Dental Medicine*, *A Journal of Tuberculosis and Chronic Pulmonary Diseases*, *Blood*,

The Journal of Hematology, The Quarterly Bulletin of Sea View Hospital, Spectroscopia Molecular, and Scientia International. Abstracts of the communications to the second World Congress of Cardiology, held in Washington, D.C., in September 1954, were presented in Interlingua.

According to Dr. Alexander Gode, chief of the Interlingua division of Science Service and instructor for the new NYU non-credit course, the number of persons who can read and understand the tongue runs into millions. It has elements of the Latin languages as well as of the Teutonic and Anglo-Saxon, he points out, and uses the vocabulary of science and technology that is common to almost all the languages of the world.

"Interlingua does not look strange to eyes accustomed to reading English," Dr. Gode maintains. "Spaniards, Portuguese, Italians, and Frenchmen, will find the new language quite familiar, and the Chinese, Japanese, and other people of the Orient will find pleasing the lack of difficulties with grammar."

New York University is announcing a workshop for Registrars and Admissions Officers, to be held June 20 to July 1. The workshop is concerned with the problems of the registrar and the admissions officer in institutions of higher learning, as well as with the history, responsibilities, and opportunities associated with these offices. Particular attention is given to recent developments and planning for the future in the following areas:

Admissions	Forecasting Enrollment
High School-College Relations	Machine Equipment
Registration	Veterans' Affairs
Record Keeping	Selective Service
Research	Legislation affecting Higher Education

Forenoons (10-12) are to be devoted to lectures, demonstrations, and discussions. Afternoons will be devoted to field trips, including visits to large and small institutions of various types in the greater metropolitan area, and to meetings with consultants. A visit to the Educational Testing Service, Princeton, New Jersey, is among the contemplated field trips. Opportunities will be provided for individual conferences.

The workshop staff consists of Elwood C. Kastner, Dean of Admissions and Registrar, New York University, Henry F. Rossi, Associate Registrar, New York University, and visiting lecturers and consultants.

The workshop is intended for Registrars, Admissions Officers, and persons professionally engaged in these fields of work. Enrollment is limited to twenty.

The course will carry three points of graduate credit. Tuition, University fee, and Student Activities Fee total \$85.00.

Workshop members desiring to secure living accommodations at Washington Square should write to Miss Thelma DeForest, Director of Student Residence, New York University, Washington Square, at least four weeks before the beginning of the workshop.

Requests for further information and admission should be directed to Dean Elwood C. Kastner, New York University, Washington Square, New York 3, N.Y.

A summary statistical report of the Institute of International Education's Annual Census of Foreign Interns and Residents in Training in Hospitals in the United States was reported in December 1954. The Census was undertaken as a pilot project in 1953. Last Year's returns showed a foreign Intern and Resident population of 3,155.

A \$30,000 grant to be used in the development of Northwestern University's general education program has been announced by the Carnegie Corporation of New York City. According to Payson S. Wild, dean of faculties, the funds will support studies aimed at developing "a purposeful four-year program of general education for all undergraduates."

Northwestern's seven undergraduate schools, Dean Wild pointed out, not only develop their own patterns of professional training but also are free to prescribe nonprofessional programs as well. This means that students in different schools do not necessarily share equivalent non-professional training, "We do not believe in herding all undergraduates into a single ironclad curriculum which would not allow for individual abilities or tastes," Dean Wild said. "But we do desire a University program through which general education extends over the four undergraduate years and is not something to be finished quickly in order to proceed with professional training. Our goal continues to be a program providing students with a well-rounded education plus professional training in special fields of endeavor."

The Carnegie Corporation of New York City has granted \$40,000 to the University of Wyoming to aid in the study of American foreign policy, according to an announcement made here recently by Pres. G. D. Humphrey.

The four-year experimental program includes three lectures during the school year by outstanding experts, a summer school program, and four annual conferences of community leaders, all paid for by the Carnegie

grant. Each quarter of the regular academic year, a noted lecturer on foreign relations will be brought to the campus. This provision goes into effect in the winter quarter.

The grant provides for the reactivation of the Institute of International Affairs which has been inactive since 1952. For four years, institute scholarships amounting to \$150.00 will be awarded to 20 Wyoming teachers.

A two to three-day conference will be held each year on this campus for 40 community leaders from over the state. During the community leader program, foreign political questions will be discussed.

Aid to "underdeveloped areas" of education is a key aim of grants amounting to \$1,507,000 have been announced by the Carnegie Corporation of New York. New studies of the British Commonwealth and American state governments are among the projects to be launched with the philanthropic foundation's support.

Duke University received a \$350,000 grant from the Corporation to establish a new academic center devoted to study and research on the British Commonwealth. While American universities have developed research programs on most other major world areas, none has ever undertaken a major program on the Commonwealth countries. Nationally-known scholars who will direct the project, including economists, historians and political scientists, state that the Commonwealth provides a rare laboratory in which a common tradition among English-speaking people can be examined in a variety of national contexts. The Carnegie grant, payable over a 5-year period, will be used for graduate fellowships and post-doctoral grants for research and field studies; part of the fund will also bring Commonwealth scholars to Duke for research and teaching.

The problems of state governments in the United States will be examined at a conference scheduled for next fall by the American Assembly. A \$75,000 Corporation grant to Columbia University, with which the American Assembly is associated, covers the costs of this conference and several subsequent meetings on state government planned for various parts of the country. The American Assembly, founded by Dwight D. Eisenhower when he was president of Columbia, will direct its attention this year to the status of state government, a vital but frequently overlooked facet of the American political scene.

Largest single grant being announced by Carnegie Corporation is a half-million dollar grant to the National Citizens Commission for the Public Schools toward support of what is planned as its successor organization, the National Citizens *Council* for the Public Schools. The Commis-

sion is the chief organization working to stimulate popular interest in and action on public school problems. The successor organization, the Council, will act primarily as a clearinghouse for state groups working to meet the needs of the public school system.

Three grants in the linguistics field include a \$75,000 appropriation to the Social Science Research Council for support of its committee on linguistics and psychology, which will examine the role of language as a mold of human thought; and a \$10,000 award to the American Council of Learned Societies for grants-in-aid to enable scholars to increase their scientific knowledge of linguistics. Harvard University received \$7,250 for completion of a study of aptitudes in second-language learning, which was started with an earlier Corporation grant of \$33,000.

Columbia University has been awarded \$100,000 by Carnegie Corporation for preparation and publication of translations of key Oriental documents. At present, the lack of such translations handicaps students and teachers interested in Far Eastern affairs. The Columbia University Press has published similar translations of important documents of the Western world in its well-known series, *Records of Civilization*. The University of Louisville has received \$110,000 for 5-year support of its Southern Police Institute. This training school for police officers from the Southern states stresses the social significance of police work as well as modern methods of crime detection and law enforcement. The Association of American Colleges has received a \$60,000 grant from the Corporation for support of a summer institute for new college presidents.

Other grants include a \$12,500 appropriation to Tulane University for seminars to be conducted by the Society for American Archaeology; and a \$4,000 allocation to the National Council of Independent Schools for a study of teacher training for secondary schools.

Through its British Dominions and Colonies program, the Corporation voted grants to the oldest university in French Canada and the newest English-speaking university in North America. Laval University, Quebec, one of the leading French-Canadian institutions of higher education, received \$130,000 for social science research on the problems of industrial Quebec. Memorial University, St. John's, Newfoundland, was voted \$50,000 for faculty travel and historical research on the province. A \$20,000 grant to Queen's University, Ontario, supports a project in biochemical research which, by examining organic compounds such as amino acids in fossil-bearing rocks, may provide scientific evidence as to when life on earth began. The University College of the West Indies, Jamaica, received \$1,600 for consultations on educational broadcasting for rural listening groups.

Carnegie Corporation was founded in 1911 by the late Andrew Car-

negie for "the advancement and diffusion of knowledge and understanding among the people of the United States and of the British Dominions and Colonies." Current assets are \$173 million at cost value; income only can be used for appropriation.

THE MIDDLE STATES ASSOCIATION

The 23rd Annual Meeting of the Middle States Association of Collegiate Registrars and Officers of Admissions was called to order by President Hazel H. Feagans at 9:30 on the morning of Saturday, November 27, 1954, at the Haddon Hall in Atlantic City, New Jersey. One hundred eighty-six registered for the sessions.

The first session, devoted to the problem of High School-College Relations, was a panel presentation. The guest panelist was Clyde Vroman, of the University of Michigan, ably assisted by a group of our own members moderated by C. O. Williams. The discussion was based largely on the National Association's Document 3-*Guide to High School-College Relations for Registrars and Admissions Officers*. Dr. Vroman summed up this somewhat elusive and intangible problem by characterizing it as "a devotion to the human values involved" in bringing the student smoothly along the path from elementary school to secondary school to college or university.

The second session was called to order at eleven-thirty by Chairman Ernest Whitworth. The first portion of this session was devoted to a slide presentation of "The Impending Tidal Wave of Students," with a recorded commentary by Dr. Ronald B. Thompson. Following this, Dr. Richard H. Sullivan, of the Educational Testing Service, called attention to several variables which might very well serve to make Dr. Thompson's projected figures quite conservative; in the first place, he considered it highly probable that the percentage of the appropriate age-group actually in college should continue to increase; if this is so, by 1970 Thompson's highest estimate of fifty percent (in place of thirty-one percent) might be attending; further, if the high attrition is reduced, the retention of more students for four years again will complicate the problem. Dr. Sullivan announced a continuing study by the Educational Testing Service, under a grant by the Carnegie Foundation, not only of the *numbers* in any age-group but of the *abilities* within the group as well. George Kramer (Rutgers University) then pointed out some of the peculiar local shadings of the problems created, for example, by the migration of College Students.

The luncheon meeting was convened at twelve-thirty. National President Albert F. Scribner brought advance information on the Boston meeting, which promises to be outstanding. His address primarily, however, raises some pertinent questions which accompany the inevitable tidal wave.

Among other things, he asked whether we have sufficiently explored the potentialities of television and other technical advances. He suggested further that, by increased efficiency of operation, more students could be cared for with existing facilities and faculties. This increased efficiency might very well involve a reduction in the number of specialized courses offered. He made a plea for the college administrators to publicize the needs of higher education, just as the elementary and secondary school problems are being publicized.

The Annual Meeting closed with a business session at which Luther Harned Martin, Registrar of Rutgers University was elected to Honorary membership in the Association. Finally, the following officers were elected for the coming year:

President—Robert L. Taylor, The City College of New York

Vice-president—C. O. Williams, Pennsylvania State University

Editor—Catherine R. Rich, The Catholic University of America

The incumbent continues as Secretary-Treasurer for another year of a two-year term.

Respectfully submitted,

JOSEPH G. CONNOR
Secretary-Treasurer

TEXAS ASSOCIATION OF COLLEGIATE REGISTRARS

The thirty-third annual meeting of the Texas Association of Collegiate Registrars was held on December 2-4, 1954 at the Nueces Hotel, Corpus Christi, Texas.

It was the pleasure and good fortune of the Texas Association to have as its guest and principal speaker, Mr. William C. Smyser, Registrar, Miami University, and Editor, *COLLEGE AND UNIVERSITY*. Mr. Smyser addressed the meeting on two occasions, each time sharing with the membership his wisdom and experience in the field of higher education. Association President John E. Tompkins, Jr., Registrar, Tarleton State College and Association Vice-President S. W. McKewen, Registrar, Stephen F. Austin State College, presided at these two sessions.

Great progress was made during this meeting in coordinating the efforts of secondary school administrative personnel and collegiate registrars in aiding the student to bridge the gap between the two educational levels. A very constructive panel discussion was held, involving representatives of three major Texas high schools, Mr. G. R. Broad, Principal, Miller High School, Corpus Christi, Dr. D. E. Bailey, Principal, Beaumont High School, and Mr. Floyd Honey, Principal, Lubbock High School. College registrars on the panel included Mr. Leonard G. Nystrom, Registrar, Southern Methodist University, who is a member of the AACRAO High School-College Relations committee, M. H. Y. McCown, Reg-

istrar, University of Texas, and Mr. H. M. Dawson, Registrar, Temple Junior College. A permanent committee of the Texas Association was set up to work further with the administrators of Texas senior high schools in solving some mutual problems, the committee being composed of the following personnel: Mr. Nystrom, for a term of three years, Mr. Dawson, for a term of two years, and Mr. W. P. Clement, Registrar, Texas Technological College, for a term of one year. Mr. Ray Laird, Registrar, Laredo Junior College, Immediate Past President of the Association, presided for this panel session.

The traditional "question box" session was held on Friday evening with Mr. Ray Perryman, Associate Registrar, Texas A & M College, serving as chairman.

On Saturday morning, Dr. E. H. Poteet, President, Texas College of Arts and Industries, addressed the Association on the topic, "Population". Through this topic Dr. Poteet developed current population trends and how this increased population will affect college administration, enrollments, and responsibilities in the near future.

Officers elected for the 1955-56 term are: President, Mr. Frank H. Morgan, Registrar, West Texas State College, Canyon, Vice-President, Mr. Jerome Vannoy, Registrar, McMurray College, Abilene, and serving the second year of a three year term as Secretary-Treasurer, Mr. Perrin C. Smith, Registrar, Austin College, Sherman, Texas.

The success of this meeting is attributed directly to the Local Arrangements Committee made up of Mr. Grady Anderson, Registrar, Del Mar College, Dr. George W. McCulley, Registrar, Texas College of Arts and Industries, and Mr. A. H. Wilcox, Registrar, University of Corpus Christi. Excellent musical programs were presented to the Association by the music departments of these institutions.

Respectfully submitted,
PERRIN C. SMITH
Secretary-Treasurer

THE MECHANICS OF THE JOB

Would you like to figure out some way to have one secretary turn out fifty or more letters a day (so perfect you don't have to read before signing) and yet have the same girl do a number of other jobs? Are you having trouble with processing identification cards so that the students have them before the last quarter of the year? Are you searching for a way to collate a dozen mimeograph sheets quickly without turning your office into a paper factory and wearing out both floors and nerves? Are you looking for a cheap way to get out hundreds of transcripts quickly and accurately, even at exam time?

Would you like a system of classifying statistics so efficient that you could tell immediately how many blue-eyed siblings are registered even if asked during registration week?

Are you crowded for file space? Would you like to have four or eight file drawers, now crammed tight, available once again and yet have records of everything those file drawers now contain?

Do you have need for a special test none of the familiar standard tests can fill?

Are you looking for a more attractively styled or a better-sized, or a better quality diploma?

Then, Brother (or Sister) you're ready—or yes, you ARE ready—to get many of your prayers answered at the Forty-first Annual Meeting of the American Association of Collegiate Registrars and Admissions Officers in Boston April 18-21, 1955.

Clue: Just visit the Exhibits—every problem mentioned above can be solved by one or more of our exhibitors, and so can many, many others not even mentioned above. Please make it a point to visit the Exhibits and meet the nice people who are there to serve you. Not only are they very competent; they are very loyal friends to our Association.

T.A.G.

Directory of Regional Associations 1954-55*

ALABAMA

President: Carl E. Todd, Howard College, Birmingham
Secretary: Miss Clercie Small, Alabama Polytechnic Institute, Auburn

ARKANSAS

President: Miss Roberta T. Dorr, Arkansas College, Batesville
Secretary: Mrs. C. S. Henderson, Agricultural, Mechanical and Normal College,
Pine Bluff

COLORADO-WYOMING

President: John R. Little, University of Colorado, Boulder
Secretary: George W. Gibbs, Colorado Woman's College, Denver

GEORGIA

President: Walter N. Danner, University of Georgia, Athens
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President: Miss Marie J. Meloy, Lake Forest College, Lake Forest
Secretary: Miss Elizabeth McCann, Loyola University, 820 N. Michigan Ave.,
Chicago

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Secretary: Emmett Arnett, Indiana University, Bloomington

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President: Gladys Phinney, Washburn University, Topeka
Secretary: Sister M. Ramona Horsch, Sacred Heart College, Wichita

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MIDDLE STATES

President: Hazel Feagans, American University, Washington, D.C.
Secretary: Joseph G. Connor, Georgetown University, Washington, D.C.

* This represents the officers who served during 1954-55 and not those elected to office during the year.

MISSISSIPPI

President: T. K. Martin, Mississippi State College, State College
Secretary: Mildred L. Herrin, Hinds Junior College, Raymond

MISSOURI

President: Martha Ricketts, Central College, Fayette
Secretary: Paul Arend, Rockhurst College, Kansas City 4

NEBRASKA

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80th St., Los Angeles 45

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Secretary: Wendell R. Fuller, Des Moines Still College of Osteopathy and Sur-
gery, Des Moines 9

UTAH

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Secretary: J. A. Norton, University of Utah, Salt Lake City 1

VIRGINIA

President: Nicholas C. Brown, Emory and Henry College, Emory
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President: Lora Green, Wisconsin State College, La Crosse
Secretary: Elva Boettcher, Ripon College, Ripon

Placement Service

Under its Committee on Evaluation and Standards, the AACRAO maintains a Placement Service, which serves as a clearing house for those seeking employment or those with vacancies to fill. This service is under the direction of J. Everett Long, West Virginia University, Morgantown.

The registration fee is \$3.00, which includes one publication on this page. Persons listing their names with the Placement Service should send with their application for listing a copy of the advertisement (limited to 50 words) which they wish to insert. For additional insertions beyond the first the charge is \$1.00 per issue. Remittance in full in favor of the American Association of Collegiate Registrars and Admissions Officers should accompany the application.

Application for listing, and inquiries about advertisements, should be directed to Mr. Long at the address given above, or to the Editor.

Neither the Association nor its Committee is an employment agency, and neither assumes any obligation as to qualifications of prospective employees or responsibility of employers. It is expected that at least some reply will be made to all those answering announcements.

SEEKING POSITION AS REGISTRAR; ADMINISTRATIVE ASSISTANT; ADMISSIONS COUNSELOR. Accustomed to heavy responsibility. M.A. in Education—Guidance and Counseling—plus additional graduate work. Ten years as Personnel Dean; three years as Registrar; woman, mature, single, Protestant. Address E. F., care Editor. (1/1)

POSITION AS DIRECTOR OF ADMISSIONS WANTED. Woman with M.A. degree and 15 years experience in evaluating transcripts, interviewing, counseling and corresponding with prospective students and parents, meeting alumnae, and visiting private and public schools throughout the United States. Protestant, single, excellent health. Prefer Eastern seaboard. Address B. S. W., care Editor (1/1)

POSITION SOUGHT. Background: teaching, guidance, counseling—college level since 1940. Working toward Ed.D. degree USC; major Guidance and Counseling—Field Work under Dr. H. J. Sheffield, Director of Admissions and Registration; experience also as employee in Registrar's Office and Office of Admissions at USC. Woman. Address M. S., care Editor (1/3)